

JANUARY
1936

WITH the beginning of the new year—as has been the case since the turn of the present century, Ungerer & Company continues to lead the field of suppliers of high quality essential oils and perfume raw materials for the soap maker.

We are at all times in a position to supply and quote advantageously on such important soap oils as Geranium Lavender, Rosemary, Patchouly, Citronella, and Thyme. We hope to have the opportunity of supplying you with these and others during 1936.

UNGERER



UNGERER & COMPANY

15 West 20th Street

New York

159

SOAPS
INSECTICIDES
DISINFECTANTS
CHEMICAL SPECIALTIES
SANITARY SUPPLIES
POLISHES
CLEANERS

FALCON DEODORANTS



FALCON DEODORANT BLOCS

FALCON BLOCKETTES



FALCON PERFUMED CRYSTALS

ONE WHIFF . . .

is better than a thousand words

Into your customer's hands, put a Falcon Bloc . . . ask him to smell it. Then, as he breaks the cellophane wrapper and catches the full fragrance, watch him smile.

Such pleasing fragrance comes only from the finest perfumes. Add to this our original process of molding cold, under tons of pressure, and you have the reasons why Falcon Deodorants always give unfailing deodorization and fragrance.

Begin now to sell Falcon Deodorants. They cost no more than the ordinary kind. And once your customers use Falcon, they'll never be satisfied with any other.

EAGLE SOAP CORPORATION
HUNTINGTON INDIANA

AGB
SLJ



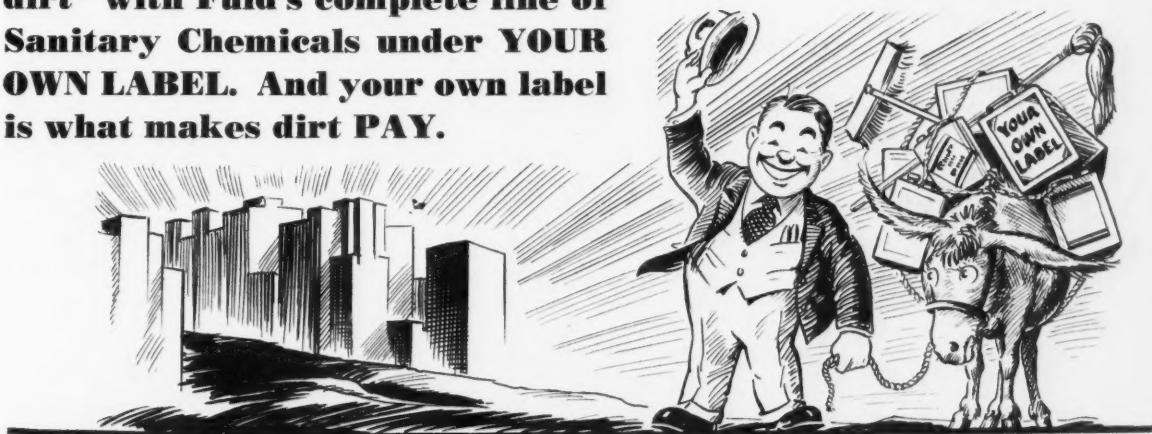
A low-priced disinfectant of superior quality — featuring a SWEET pine character—which produces a golden yellow stable EMULSION.

COEFFICIENT 2 F. D. A.
Inerts not over 10% (Water)

Join up with the hundreds of 1936 prospectors—hittin' the trail for Lucky Diggin's among the grandest canyons of big buildings. We'll show you how to get at the "pay dirt" with Fuld's complete line of Sanitary Chemicals under YOUR OWN LABEL. And your own label is what makes dirt PAY.

Join Fuld's "Thirty-Sixers"

FOR THE "PAY DIRT"



OCT 28 1937

WHAT FULD MAKES for the LEADERS

LIQUID CLEANERS

- Pine Scrub Soap
- Liquid Scrubbing Compound
- Sassafras Scrub Soap
- Floor Bleach
- Rug Shampoo

INSECTICIDES

- Roach Powders
- Fly Sprays
- Cattle Sprays
- Pyrethrum Sprays
- Moth Spray
- Rat Exterminators
- Sprays for Special Purpose Concentrates

FLOOR WAXES and SEALS

- Self-Polishing Wax
- Liquid Wax
- Wood Seal
- Gym Seal
- Terrazzo Seal
- Wax-Var
- Paste Wax
- Dance Floor Wax

CONTAINERS

- Urinal Strainers
- Wall Containers
- Soap Dispensers

CLEANING COMPOUNDS

- Washing Compounds
- Window Cleaner
- Scouring Compounds
- Fabric Cleaners
- Weed Killers
- Waterless Cleaner
- Bear Coat Cleaner
- Paint & Varnish Remover
- Sterilizing Agents
- Tile Bleach

LIQUID DEODORANTS

- Chloroif
- Formal Chloro Sprays
- Theatre Sprays
- Pine Deodorant
- Drip Machine Fluid

LIQUID and BASE SOAPS

- Liquid Hand Soaps
- (All percentages 10 to 40%)
- Shampoos
- Cocoanut Oil Base Soaps

OIL and SOFT SOAP

- All Percentage Oil Soaps
- Jelly Soaps

DISINFECTANTS

- Pine Oil
- Coal Tar
- (All Co-Efficients)
- Cresol Compounds
- Chlorine
- Powdered Chlorine

POLISHES

- Count 1234567
- Metal Polishes
- (Liquid, Paste & Powdered)
- Auto Polish
- Furniture Cream
- Furniture Polish
- Floor Oil
- Silver Pastes and Creams

PLUMBING SPECIALTIES

- Drain Pipe Cleaners
- Liquid & Powdered Bowl Cleaners
- Tile & Enamel Cleaners
- Boiler Compounds

DEODORANT BLOCKS and CRYSTALS

- Urinal Blocks
- Deodorant Blocks
- 2 to 40 oz. sizes
- Deodorant Crystals



DELICATELY
SCENTED SOAPS
ARE WHAT
I LIKE!

DU PONT
REG. U. S. PAT. OFF.

AROMATICS

*Quality Aromatics
to meet every need of the
Soap Manufacturer*

E. I. DU PONT DE NEMOURS & CO., INC.
ORGANIC CHEMICALS DEPARTMENT
FINE CHEMICALS DIVISION
WILMINGTON, DELAWARE

SOAP

Reg. U. S. Patent Office

Volume XII
Number 1

January, 1936



SANITARY Products Section, which is included as a department of every issue of SOAP, begins on page 77. Production Section begins on page 65.

«

Contents

• Editorials	21
• Raw Materials, Taxes, et al.....	23
• Dry Cleaning Soaps and Solvents..... By S. W. Putnam	25
• Soaps or Emulsions for Silk Degumming? By J. F. Springer	29
• A Half-Century in Potash Soaps..... By C. F. Young	33
• Stable Oxygen Soap Powders.....	65
• Shampoo Compositions	67
• Milled Transparent Soap.....	69
• What's Ahead in Insecticides? By C. P. McCormick	94-b
• Healthful Dissatisfaction in Disinfectants..... By W. B. Eddy	94-c
• Specification for Liquid Insecticide..... By Dr. Robert C. White	94-d
• Advances in Disinfectants in 1935..... By Dr. Emil Klarman	95
• The Phenol Coefficient..... By Jack C. Varley	101
• Effect of Metals on Fly Sprays..... By David G. Hoyer	105
• Emulsion Floor Waxes..... By Richards Jarden	109
• Personal and Impersonal.....	45
• Contracts Awarded	53
• Records of Trademarks.....	48
• New Equipment	51
• New Patents	51
• Market Reports	54-57
• Current Raw Material Prices.....	59-62
• Products and Processes.....	73
• Classified Advertising	131
• Advertisers' Index	136

Published monthly on the 15th by

MAC NAIR-DORLAND COMPANY, INC.

254 WEST 31st STREET

NEW YORK, N. Y.

Subscription rate, \$3.00 per year. Foreign, except Canada, \$4.00. Canadian, \$5.00. Copy closing dates—7th of month of issue for reading matter and 25th of month preceding month of issue for display advertising. Entered as second-class matter, April 11, 1931, at Post Office, New York, under act of March 3, 1879. Mail circulation, December, 1935 issue 3,123 copies. Total distribution, 3,600.



ANNOUNCING . . .

. . . a new source of supply for

ESSENTIAL **O**ILS **A**ROMATIC **C**HEMICALS **P**ERFUME **B**ASES **F**LORAL **E**SSENCES

BACKED by twenty-five years of experience in essential oils and perfuming materials which have enabled us to establish contacts, and to know thoroughly the best sources of supply, both foreign and domestic. The sources from which we draw are world-wide, with quality safeguarded by our intimate knowledge of the business.

OUR policy is already definitely established, to maintain the highest standards of quality. Our analytical and control laboratories have been established to insure and further safeguard these standards of quality. The background of our personnel is your additional assurance that we can, and will, serve you to advantage. Let us prove it!

CHARLES FISCHBECK Co., INC.

119 West 19th Street

New York

"Our Quarter-Century of Experience is your Protection"



31118

ANNOUNCING

THE NEW FELTON CATALOGUE OF AROMATIC PRODUCTS

Send For It Now!



AROMATIC PRODUCTS BY

Felton Chemical Company's new catalogue is a practical reference book classifying aromatic products according to usage and price. Aromatic chemicals, perfume specialties and compounds, terpeneless oils, coloromes, aquaromes, technical odors and numerous other items of special interest to you are listed in it, in clear, concise manner. Perfumers, cosmetic manufacturers, soap makers and all

those engaged in kindred lines using perfumes and aromatics should certainly have this valuable, new catalogue on hand for ready reference.

IF YOU HAVE NOT RECEIVED YOUR COPY WE WILL BE GLAD TO SEND IT IMMEDIATELY ON REQUEST!

FELTON CHEMICAL COMPANY

INCORPORATED

603 JOHNSON AVENUE, BROOKLYN, N. Y.

Manufacturers of AROMATIC CHEMICALS, NATURAL ISOLATES, PERFUME OILS, ARTIFICIAL FLOWER AND FLAVOR OILS

Stocks carried in principal cities:

Boston, Mass.

Philadelphia, Pa.

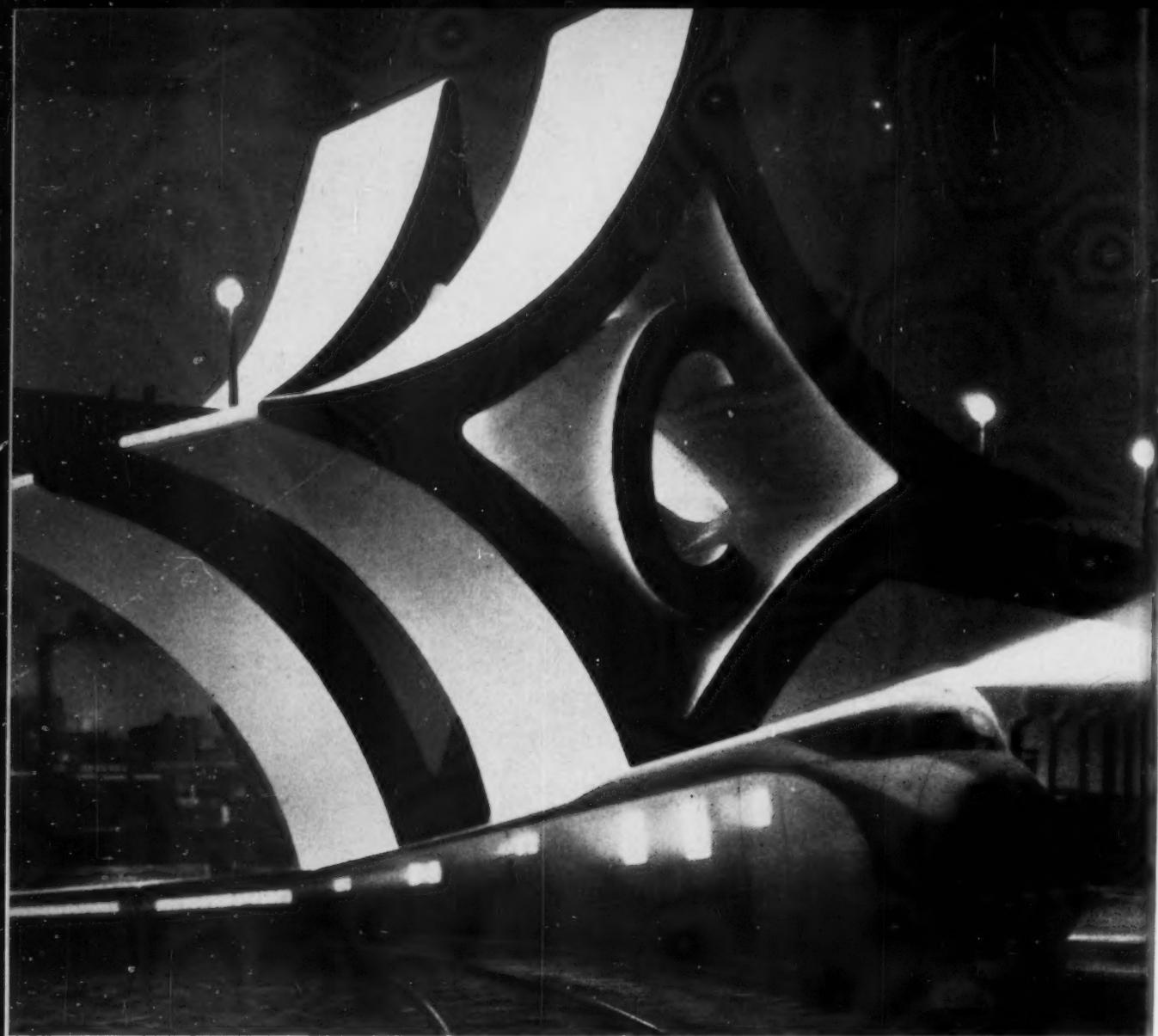
Sandusky, Ohio

Chicago, Ill.

St. Louis, Mo.

New Orleans, La.

Los Angeles, Calif.



INDUSTRY is speeding ahead . . . and the pace grows swifter and swifter. Clifton Products are streamlined to eliminate sales resistance, and enable progressive jobbers to forge to the front.

If you, too, want to build a successful repeat-order business—and want to do it quickly—write now for details about our Liquid Soap and Bases, Disinfectants, Deodorizing Blocks, and other sanitary products.

CLIFTON CHEMICAL CO.

246 FRONT ST.

NEW YORK

COLUMBIA

SODA ASH * CAUSTIC SODA * MODIFIED SODAS *

CALCIUM CHLORIDE *

THE COLUMBIA ALKALI CORPORATION
30 ROCKEFELLER PLAZA • NEW YORK

Executive Sales Offices
Branch Sales Offices
BARBERTON, OHIO
431-451 ST. CLAIR ST.
CHICAGO
CAREW TOWER
CINCINNATI
PITTSBURGH
Plant at BARBERTON, OHIO

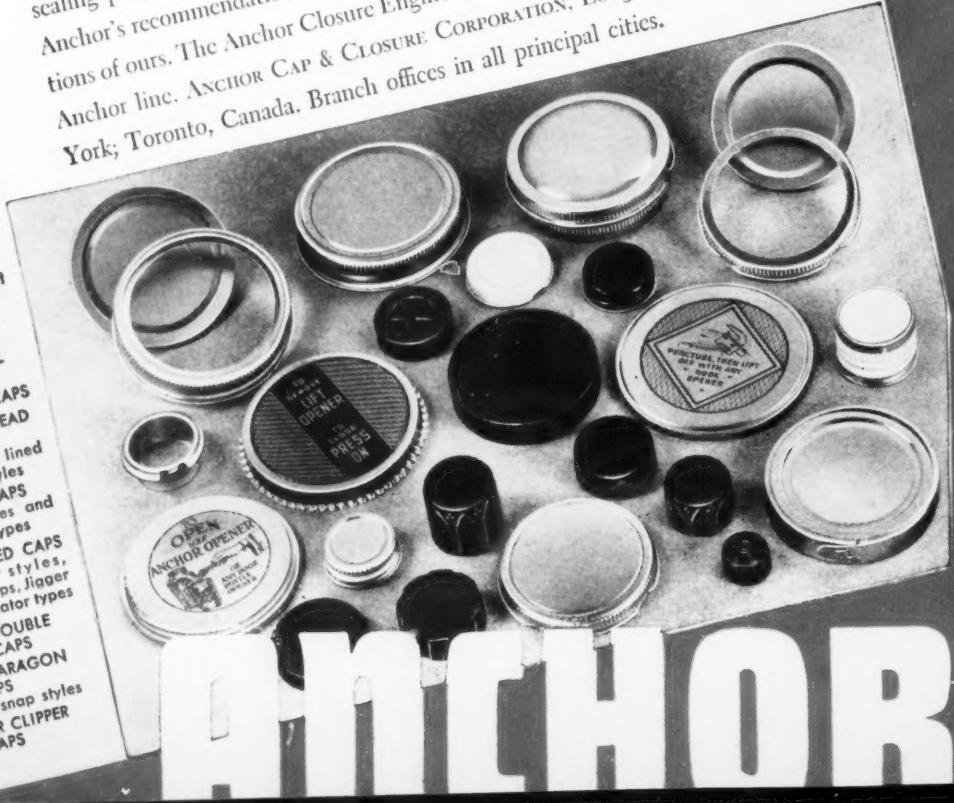


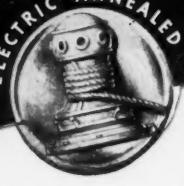
ANCHOR MAKES THE MOST COMPLETE LINE OF CLOSURES IN THE WORLD

**The Line of
Anchor Closures
Includes:**

ANCHOR D CAPS
ANCHOR F CAPS
ANCHOR K CAPS
ANCHOR T CAPS
ANCHOR HALYARD
CAPS
ANCHOR BAND CAPS
ANCHOR AMERSEAL
CAPS
Also 2 piece and gasket
lined types and gasket
ANCHOR AMERSEAL
No. 67 Boxes
ANCHOR AMERSEAL
CAN NOZZLES
ANCHOR BEACON CAPS
CONTINUOUS THREAD
CAPS
Also 2 piece, gasket lined
and No Knurl styles
DEEP SCREW CAPS
Also 2 piece styles and
gasket lined types
ANCHOR MOLDED CAPS
Bottle and jar styles,
Tamper-proof caps, Jigger
caps and Applicator types
ANCHOR DOUBLE
SHELL CAPS
ANCHOR PARAGON
CAPS
Screw and snap styles
ANCHOR CLIPPER
CAPS

EVERY sealing job is a problem of its own. A vacuum seal may be required for one product; another needs an air-tight closure; another a highly decorative seal, and still another a cap that facilitates easy opening. And so on for actually thousands of different requirements and purposes. Sometimes a glass package is sold only locally. A certain type of closure is satisfactory. A more perfect seal is required for the product that goes to the four corners of the earth. So here at Anchor we have developed the world's largest line of closures—of tin, aluminum, and molded materials—actually the right closure for every conceivable sealing purpose. No matter what you pack in glass, you can be certain that Anchor's recommendations are based on your requirements, not on any limitations of ours. The Anchor Closure Engineer will be glad to show you the entire Anchor line. ANCHOR CAP & CLOSURE CORPORATION, Long Island City, New York; Toronto, Canada. Branch offices in all principal cities.





GLASS THAT REFLECTS quality

THE Capstan bottles featured above, though they represent only one of many designs available, make decidedly appropriate and handsome containers for liquid polishes and waxes, for soaps or cleaners or disinfectants—in fact, for specialties of all kinds. But if your package requirements or your personal desires indicate another type or shape, be sure to investigate the rest of Capstan's extensive line of glassware.

Though differing in outward appearance, all Capstan containers are similar underneath...in

the quality of the materials that go into them and in the fine way they are made. Capstan's way is to put unusual strength, clarity and uniformity into them through careful manufacture made possible by our long experience and our modern, up-to-date equipment. All are electric annealed, all are accurate in capacity and in finish, all are free from the defects and irregularities found in some commercial glassware. Ask us for suggested styles for the products you pack. CAPSTAN GLASS COMPANY, Connellsville, Pa. Associate Company: SAL GLASS WORKS. Branch offices in all principal ci



CAPSTAN

SOAP PERFUME SPECIALS

by SOAP PERFUME SPECIALISTS

Will 60 or 75 cents perfume 100 pounds of toilet soap? It will, if your perfume has been *specially* made by perfumers who have made a lifetime study of soap.

We have built up an entire department along those lines and invite your inquiries.

new

ROSE
GARDENIA
LILAC
ORCHID
JASMIN
SANDAL
BOUQUETS

Price range on above oils \$1.50 to \$4.00 per lb. All give adequate perfume results in 1/4% to 1% strength.

van Ameringen-Haebler, Inc.

Aromatic Essentials

315 Fourth Avenue, New York

180 No. Wacker Drive, Chicago

438 West 48th St., Los Angeles

42 Wellington Street, E., Toronto

Factory, Elizabeth, N. J.

LABORATORY CONTROL



assures
uniform
quality of

DAVIES-YOUNG PRODUCTS

NOW a complete line of sanitary
supplies sold thru jobbers only

DISINFECTANTS • INSECTICIDES • DEO-
DORANT BLOCKS • POLISHES • WAXES •
GYM FINISH • FLOOR SEAL • OIL SOAPS
LIQUID SOAPS • COCONUT BASE SOAPS

THE DAVIES-YOUNG SOAP CO.
DAYTON, OHIO

A M E R I C A ' S F I N E S T O C E A N F R O N T H O T E L



Socially Comfortable

" . . . Socially comfortable, if you know what I mean . . . a lot of our own crowd . . . and the bunch we barged around with on the Riviera. They're all here at the Roney Plaza, for if you really go in for Miami Beach resort life in the finer sense, you spend most of your time here anyway.

"The Beach and Cabaña Club are gorgeous. Our suite overlooks the ocean, the service is smartly continental and I guessed the chef's name after our first dinner.

"Promised to golf at two with John, then to dance in the Palm Gardens at five, so more of this later. Hurry down . . . you're missing the best winter ever."

Roney Plaza

M I A M I B E A C H

FOR PARTICULAR INFORMATION AND RESERVATIONS ADDRESS
EDWARD B. JOUFFRET, MANAGING DIRECTOR, RONEY PLAZA, MIAMI BEACH, FLORIDA
or New York office, 521 Fifth Avenue, Suite 2421, Chicago office, 180 North Michigan Avenue, Suite 1015



What O·C* means to YOU....

* Odor-coordinating, measured in terms of your product, means just one thing—fragrance appeal. And fragrance appeal is the first step toward **consumer appeal**. Lack of this essential is a handicap which neither fine packaging nor smart merchandising can overcome. That is why the successful manufacturer of soaps, toilet preparations or disinfectants gives first consideration to proper perfuming . . . and to that organization most competent to solve this major problem.

Our perfume division, aided by limitless resources of scientific data and experience gained from sixty-five years of intensive application to the study of aromatic raw materials and perfume problems, has made remarkable advances in this highly specialized field. Most significant of these is our present technique of odor-coordinating—a technique which depends for its success, not upon the **science** of perfuming alone, but upon the **art** of perfuming as well—the two harmoniously blended.

New, enlarged laboratory facilities, provided with every modern convenience and manned by a skilled personnel, are added guarantees to our customers that their problems will receive most thorough, most capable consideration. As to results, we can only say that many of the leading preparations are proving the value of FRITZSCHE perfuming in today's keenly fought competition for consumer acceptance.

It will not obligate you to consult us and if we can serve you, we will.

FRITZSCHE

816 WEST 8TH STREET LOS ANGELES, CAL.

Proprietors of PARFUMERIES de SEILLANS Seillans, France
FRITZSCHE BROTHERS, of Canada, Ltd., 77 79 Jarvis St., Toronto, Canada

Brothers, inc.

PORT AUTHORITY COMMERCE BLDG.

76 NINTH AVENUE, NEW YORK, N.Y.
118 WEST OHIO ST. CHICAGO, ILL.



Certain as gravity

DOWN into the frames from your crutchers drops the hot soap, smooth as velvet. You aren't concerned about gravity. Why worry about the silicate of soda used? P. Q. Silicate, accurately tested quality, is a dependable aid in making a stable, homogeneous mass.

Over three-fourths of our century in business has been devoted to the research and development of silicates of

soda for use in soaps and detergents. That's why for decades and decades many of America's leading soaps have been made with P. Q.'s pre-tested Silicates of Soda.

The silicate furnishing the exact properties for your special formulae is available from the P. Q. selection, the widest in industry. Send for Bulletin No. 171, which describes the 33 P. Q. Silicates of Soda.

PHILADELPHIA QUARTZ COMPANY

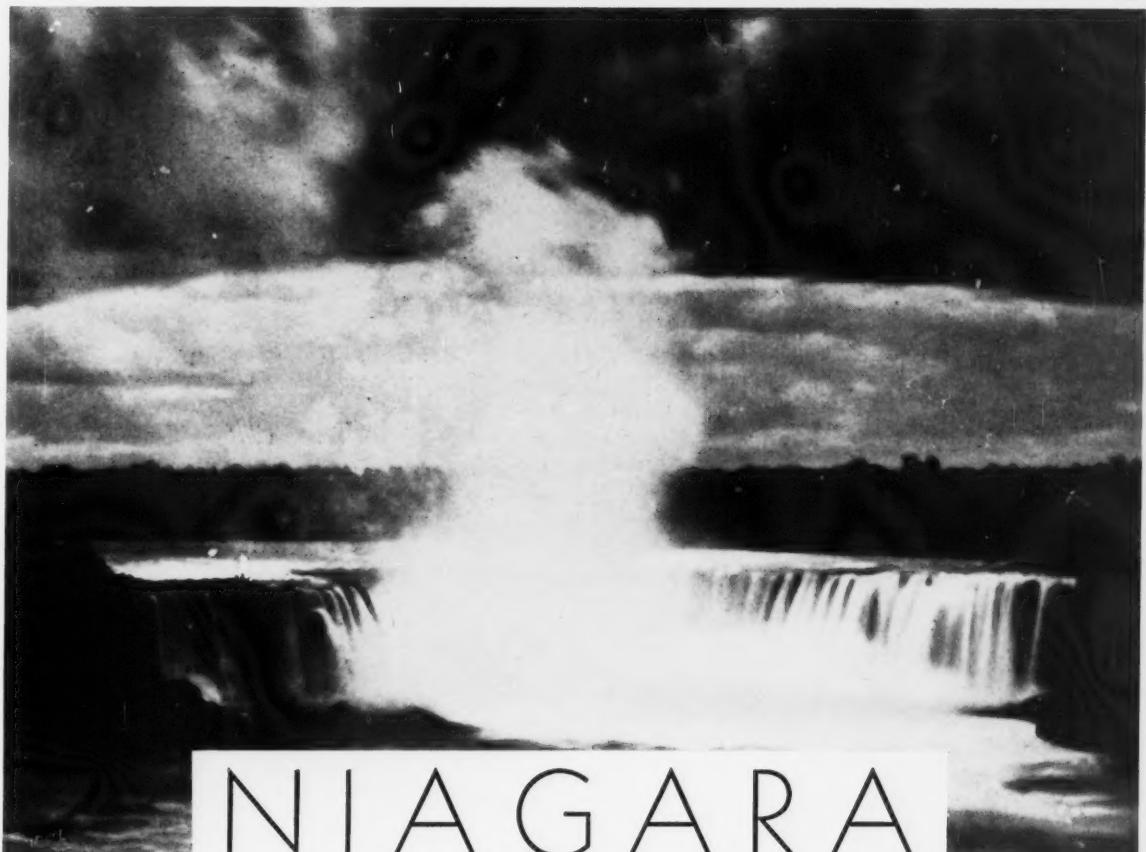
General Offices and Laboratory: 125 S. Third Street, Philadelphia, Pa. Chicago Sales Office: Engineering Building. Distributors in 60 cities. Plants at: Anderson, Ind., Baltimore, Md., Chester, Pa., Gardenville, N. Y., Kansas City, Kans., Rahway, N. J., St. Louis, Mo., Utica, Ill. Sold in Canada by National Silicates Ltd., Toronto, Ont.

ESTABLISHED 1831



SILICATES OF SODA

TIME-TESTED . . . TIME-PROVEN



**NIAGARA
CAUSTIC POTASH - CAUSTIC SODA**

"**T**IME, the careless laundryman, shrinks many of our ideals", once said a disillusioned gentleman given to making caustic comments—without, perhaps, having Caustic Potash or Caustic Soda in mind.

The implication is that Time can't shrink *some* of our ideals—and this is true of Niagara Caustic Potash and Caustic Soda. The careless laundryman has done his best but his efforts have only served to enhance the quality of these two products.

Proof? The fact that old customers stick to them through competition's thick and thin . . . and the steadily growing number of Niagara users. It's known that Niagara quality is time-tested . . . time-proven . . . and maintained by the most up-to-date equipment and methods that modern manufacture can provide.



NIAGARA ALKALI COMPANY

9 EAST 41ST STREET, NEW YORK, N. Y.

Associated with Electro Bleaching Gas Company, Pioneer Manufacturer of Liquid Chlorine

The New 1936

BLUE BOOK & CATALOG

for the Soap, Insecticide, Disinfectant and Allied Industries

IN the new BLUE BOOK we are giving firms in the soap and allied sanitary products industries a complete buying service. It is our purpose to tell you not only what to buy and where to buy it—but also to give accepted standards and tests, wherever possible, for judging the quality of the materials purchased. With this end in view we include a series of reference articles in a special appendix in each issue of the BLUE BOOK. The 1936 edition will include the following titles:

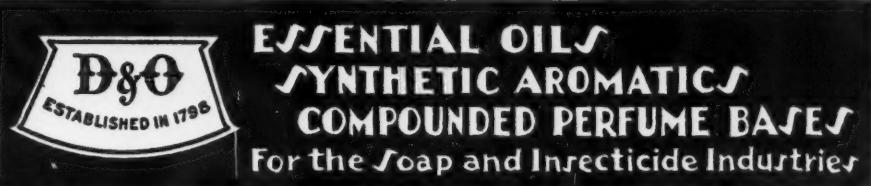
- Complete Index of all articles appearing in the 1935 numbers of SOAP.
- New Products—A Few Hints on Their Development
- Seil Modification of the Tattersfield Method for Determination of Pyrethrins
- How to Buy Sanitary Products—A Symposium by Leading Manufacturers of These Products
- Federal Specifications for Soaps and Other Sanitary Products
- Complete Text of Peet-Grady Test for Insecticides
- F. D. A. Test for Disinfectants.

The 1936 BLUE BOOK Will Be Published February 1. Copies are Mailed Free to Every Soap Subscriber. By Entering a Subscription Now You Will be Sure of Getting Your Copy of the BLUE BOOK Promptly.

MAC NAIR-DORLAND CO.

254 WEST 31ST STREET

NEW YORK CITY



ODOR COMPOUNDS

for use in
Soaps, Shampoos, Sprays, Insecticides
and for Industrial Purposes

PETRODORS

for use in insecticides, masking perfectly
all by-odors and leaving no after-stain.

OSOLS

of any desired odor. A desirable
line of water soluble bases for use
in sprays, shampoos, etc.

CHRYSDODORS

strong, lasting perfume com-
pounds for use in disinfect-
ant crystals, para blocks, etc.

A U B E P I N E
I O N O N E S
B R O M S T Y R O L
M U S K S
C O U M A R I N
T E R P I N E O L

We
Solicit
Your
Orders

*Consult
Our Service
Department*

regarding our complete line of
Perfume Compounds for Soaps
or information on any particular
product.

*137 Years
of Serving
the Industry*

Back of D. & O. Products stand
137 years of uninterrupted work
in our field. We guarantee satis-
faction.

DODGE & OLcott COMPANY

180 Varick Street . . . New York

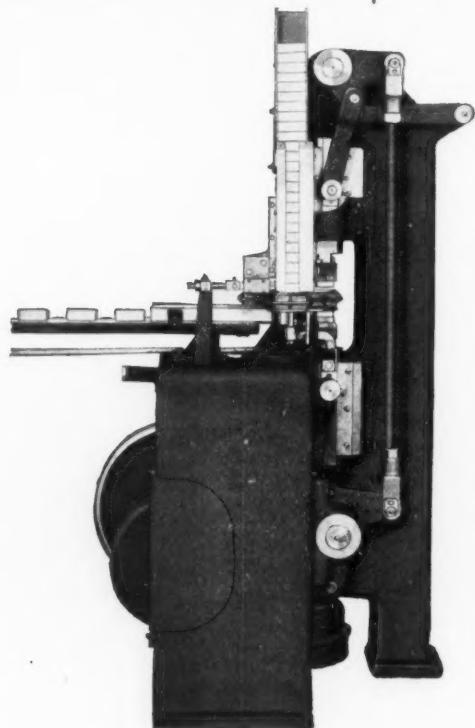
BRANCHES: PHILADELPHIA — BOSTON — CHICAGO — ST. LOUIS — LOS ANGELES

"The integrity of the house is reflected in the quality of its products." — Copyright 1930

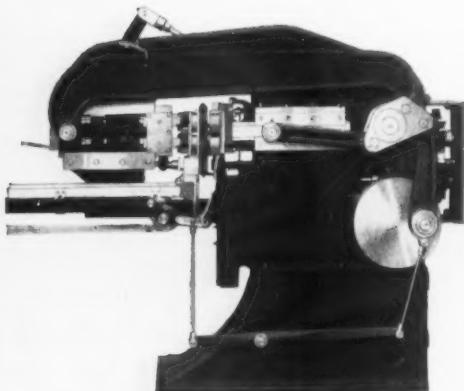
**It would pay you to use
JONES TOGGLE PRESSES**

THE LONGER SOAP CAKES,
EITHER TOILET OR LAUNDRY,
ARE UNDER PRESSURE THE
BETTER THEIR FINISH.

ALL NEW TYPES OF
JONES PRESSES
ARE TOGGLE OPERATED AND
HOLD THE SOAP UNDER PRES-
SURE TWICE AS LONG AS
EARLIER MODELS.



Type ET Toilet Soap Press



Type K Laundry Soap Press

MANY SOAP MAKERS ARE REPLAC-
ING EARLIER MODELS WITH THEM
BECAUSE OF THEIR FAR BETTER
PRESSING, GREATER PRODUCTION,
ECONOMY IN DIE WEAR AND, LAST
BUT NOT LEAST, BECAUSE THEY
OPERATE
WITHOUT NOISE OR VIBRATION

R. A. JONES & COMPANY, Inc.
P. O. BOX 485
CINCINNATI, OHIO

The Standardized *Constant Motion Cartoner* packages bottles, jars, tins, collapsible tubes and many other articles. It feeds, folds, and inserts direction sheets and corrugated board liners with the loads

SOAP

Volume Twelve

Number One

As the Editor Sees It . . .

THIS injunction secured in the District of Columbia by a Mid-West soap manufacturer against the Treasury Department, forbidding the payment of any part of the excise tax on coconut oil to the Philippine Islands, appears to spike the tax in one direction, temporarily at least. However, the important end of this tax law, and the one in which the rank and file of soap makers are interested, is not payment to the Philippines by the U. S. Treasury, but collection by the Internal Revenue Collector from Mr. Soapmaker. A suit to enjoin the collection of the tax was filed in Iowa early last month, but as yet, no decision has been handed down. To the soap industry, this Iowa decision, when it comes, is the all-important one. The unconstitutionality of the AAA and its processing taxes has no bearing on the coconut oil tax whatever. Even the reasons for its unconstitutionality are different from those which are held to invalidate the coconut oil tax.

— • —

IN surveying the current market for soap raw materials, especially for oils and fats, and in trying to obtain a rough idea of what may happen to prices in 1936, we come to the conclusion that supply and demand have been relegated to a place of lesser importance in raw material costs. As mentioned in part elsewhere, legislation and court decisions have come to replace supply and demand as paramount factors in the American oil and fat market. Taxes and not economic laws have brought the wide swings in prices during the past two years. Court decisions and new taxes may account for major

fluctuations in 1936. All the data of market students and purchasing agents become so many empty figures. What Congress or the courts will do next is all important to him who would buy wisely.

— • —

A SALES census of soaps and glycerine is being compiled for the first time under the auspices of the Association of American Soap and Glycerine Producers. The expressed purpose is to make available to manufacturers in the industry an accurate current picture of the business,—and to answer various questions which are constantly arising. Are chip sales growing or declining? What progress is liquid soap making? How are glycerine sales? Is yellow bar soap on the down trend?

Plans call for the taking of census figures at frequent and regular intervals, and disseminating promptly the totals in each class or group to those manufacturers only who have contributed figures in the group. Elaborate precautions are being taken to insure the complete secrecy of individual figures in every case. Even the management of the Association will not have access to them, their compilation being in the hands of an independent firm of accountants. Individual reports will be destroyed as soon as the compilation is completed. Totals for each group will be sent only to manufacturers in that group who report their figures,—no figures, no report. None of the material will be available for publication anywhere.

We urge all manufacturers, whether members of the Association or not, to cooperate in this important work. Especially do we recommend

to smaller firms who may not know about this census to send immediately to the Association office at 381 Fourth Avenue, New York, for blanks on which to report their figures. We can assure them and every other company in the industry of the complete confidential nature of the entire census, the elaborate precautions which are being taken to keep individual figures confidential, and the integrity of those who are handling it. If you make any soap at all, or detergents, or cleansers of any kind, whether they are your main products or not, send for census blanks. If you contribute your figures, you will receive regular reports on the totals of the products which you manufacture. To co-operate in this work is to know from time to time exactly where you stand and what are the sales trends in your own products. If you plan to be included in the census for 1935, your figures should be filed immediately.

floor waxes, and the like, judging from the finished products. Among these firms who lay claim to laboratories and chemical control when these are conspicuous by their absence or merely exist as window dressing, this inadvertently coined expression hits the nail on the head. But better yet perhaps would be "psychic chemistry".

— • —

AN extension of educational publicity on the advantages of glycerine in numerous fields is being undertaken by the Glycerine Producers Association. Recent attacks upon glycerine are responsible for extending the research work of the Association into the field of educational publicity. These attacks are chiefly ignorant, unscientific, and based on misinformation. They are not altogether new, but have become more numerous of late. A prompt and vigorous counter-attack, based on scientific data, is the best method to squelch them or any other groundless reports and twaddle.

— • —

ASHARP reduction in prices for certain laundry soap products by large manufacturers came rather unexpectedly early this month. The cuts ran up to fifteen per cent in some instances. Authentic reasons for the drop were difficult to locate. Speculation pointed to the fact that the reduction was in anticipation of lower tallow and oil prices which in turn was in anticipation of the AAA being declared unconstitutional. At any rate, there were reports of considerable short selling of tallow and fats coincident with the decline in soap prices. But with all this, there was no material change in fat and oil prices following the AAA decision, or the price reductions.

— • —

THE annual meeting of the Association of American Soap & Glycerine Producers will be held in New York at the Hotel Biltmore on January 30. An invitation has been extended to every soap manufacturer, large or small, whether a member of the Association or not, to attend the meeting. In view of the tax situation in the soap industry, there will undoubtedly be much discussion of keen interest to every soaper. To take the time to attend the meeting right now looks like good business.

— • —

HAND soaps and shampoos are exempt from the Maine Cosmetic Law in the opinion of a prominent attorney, that is provided they are entirely soap products designed solely for cleansing and for which no cosmetic properties are claimed. A "cosmetic property", we take it, is that property which beautifies the skin or the person. Some shampoos run rather close to the line in their advertising and label claims, even though they are merely solutions of potash soap. The same attorney advises manufacturers of these products not to anticipate trouble in Maine, but to await developments in the attitude of the authorities there.



Weighted average of all soap raw material costs charted since 1925. Broken line shows the ten-year average.

Raw Materials, Taxes, et al....

PRICES of soap raw materials, which scored such a sharp advance during 1934, continued their upward trend, but at a much slower rate, through 1935, and at the close of the year stood some 5 or 6 per cent above their level as of January 1, 1935. The oils and fats were again the principal performers in the soap raw material market and remain now the leading feature of the market in view of the recent Supreme Court decision on the A.A.A. and the court actions brought by various soap makers and designed to recover excise taxes paid on coconut and other oils. The important factors in this situation still are legislative and judicial ones. If Congress fails to replace the A.A.A. with some other scheme which will support the domestic commodity markets, tallow, corn oil, cotton oil and other domestic oils may possibly react sharply; or if the suits to stop payment of the 3c tax on Philippine coconut oil should happen to be successful, soapmakers' costs would be changed more by one stroke of the pen than by a whole year of market movements. In this situation it is very difficult, and perhaps an idle practice, to discuss ordinary market developments. Court decisions have come to replace supply and demand as paramount market factors.

The soap maker who is planning ahead now on estimated costs and selling prices for 1936 has a number of other important factors to require his attention be-

sides the prospective cost of his raw materials. For one thing, wages in the soap industry are reported to be up 8 to 10 per cent as compared with 1934 levels. The N.R.A. movement raised wage rates, of course, and with the collapse of N.R.A. there has been but little tendency to return to the previous lower levels. U. S. Department of Labor figures for the closing months of 1935 indicate that while the number of hours worked by laborers in the soap industry has changed but little in 1935 as compared with 1934, pay-rolls are up 8 to 10 per cent higher on the average. This may not follow all down through the industry, but is very definitely indicated by the concerns that report their pay-roll data to the U. S. Labor Department.

Taxes, too, have been higher, with every prospect that they will bulk as large, or larger, in the coming year. One leading soap company in a recent report gave its tax total for the year ended June 30, 1935, as over \$13,000,000. This compares with less than 501 per cent of this figure in the previous year. The \$13,000,000 figure apparently includes the excise tax, to which there is no comparable figure in the total quoted for the previous year, but even without the excise tax there is little doubt that for the rank and file of the industry taxes have been much heavier in the year just closed.

An additional tax this year will be the government one per cent unemployment insurance tax on pay-rolls.

On the basis of present plans, this social-security tax will be added to from year to year until by 1946, if no change is made, the tax load for this purpose alone would reach 9 per cent of the annual pay-roll. Then too, there is that matter of the national debt which is steadily growing, and which we have not as yet started to pay off. Even with a possible change to a more conservative administration, there seems no chance for tax relief for some years to come, as a big bill has already been run up which must be paid off.

WITH their raw material and labor costs rising over the past year, the more far-sighted soap makers have made praiseworthy attempts to get soap prices up to the point where they can carry the heavier costs. On tallow chip soap, which sold a year ago at around $7\frac{1}{8}$ c per lb. in car lots, the current price ranges from $8\frac{1}{4}$ to $8\frac{1}{2}$ c per lb. Packaged soaps and standard brand bars and cakes have also been advanced in price over the course of the year, but offsetting this advance has come a sharp cut in price only recently by one of the leading national sellers. The reduction referred to is one from \$3.85 to \$3.45 in the case price of white laundry bar soap. Whether this cut indicates that the company in question expects lower fat prices over the coming year, or whether it is merely a price move to meet a competitive condition is not yet quite clear.

On potash soaps, the more prominent manufacturers are now quoting prices 10 to 20 per cent higher than those in effect a year ago. Shampoo, 40 per cent, for instance is now priced by one manufacturer at 50 to 60c, comparing with a figure 10c under this a year ago. Liquid soap, 20 per cent, he is now selling roughly at 30 to 40c per gallon, as against a top price of 30c per gallon a year ago. True, some of the smaller factors in this field, who may not keep as close a check on their costs or quality, are selling at lower levels, but even these prices seem to be above the figures which concerns in this bracket were quoting a year ago. All along the line there seems to be a realization that soap prices must be pushed higher to enable manufacturers to meet the increasing burden of higher raw material costs, labor costs and taxes.

AS to the outlook on raw material prices for 1936, perhaps buyers and sellers of fats and oils have not as yet had sufficient time to study the A.A.A. decision so as to know exactly what to make of it. Up to the present time it seems to have had little effect on spot prices. Tallow has been very steady since the announcement and a number of sales have been made at the 7c figure which prevailed before the decision. The attitude of one well-known oil broker, when interviewed by a representative of SOAP, was that while the Supreme Court might be able to invalidate a Congressional measure, it could not very well declare the law of supply and demand unconstitutional.

There is basically still the same general shortage of oil and fat supplies, he said, which was the principal

factor in the spectacular price advance of 1934. Even if oil and fat producers should, with governmental control removed, revert immediately to unlimited production, there would still be a lag of six months to a year, it is pointed out, in bringing in new supplies. The stocks of corn and cotton oil cannot be materially increased before new crops are brought in; the hog population cannot be increased substantially short of six to eight months; and the cattle population takes a matter of years for readjustment.

Then too there are other possibilities. The government may be able to replace A.A.A. with some other legal plan to accomplish the same ends of crop and price control. The farmers may have learned something over the past few years to encourage voluntary control, or by the time increased fat production comes to market the lower prices to consumers may have led to an increased level of consumption which will make it possible to absorb the increased production without disturbing the market.

Whatever their reasons, most professional followers of the oil and fat market seem to look for little change in prices as a result of the A.A.A. decision. It is significant to note that European suppliers, who were at first inclined to be panicky, withdrew their lower offers quickly when they found the fat market holding fairly firm after the decision.

What buyers may think about prices is possibly a different story. It is reported that for the most part the leading buyers have remained aloof from the oil and fat market since the first of the year. One large buyer reported that its policy would be to study every aspect of the situation carefully before making any move to acquire further stocks. It may take as long as thirty days to digest the whole situation, and during that time a very quiet oil and fat market can be expected. After the meeting between farm leaders and governmental executives scheduled for Washington later this month, there may then be some clearer picture as to just what to expect.

A different situation applies, of course, to imported oils, as the 3c excise tax is in no way affected by the change in the domestic situation. With the government being reversed by the courts in so many important cases, however, many soap makers are beginning to speculate on the possibility of their recovering the substantial amounts paid in taxes on Philippine coconut oil. A test suit has been filed against the revenue department in which the excise tax is called illegal because it puts the United States in the position of raising funds here for transfer to a foreign country. Payment of the tax collected to the Philippines has been enjoined, and a favorable decision by the courts might possibly restore the whole amount to the soap industry.

Turning to other soap raw materials, chemical prices are practically unchanged as compared with a year ago. Caustic soda and soda ash contracts were renewed at

(Turn to Page 54)

A modern research dry cleaning plant, operated by the National Association Institute of Dyeing and Cleaning at Silver Springs, Maryland, studies new soaps, new solvents, and new dry cleaning methods.



Dry Cleaning Soaps —and SOLVENTS

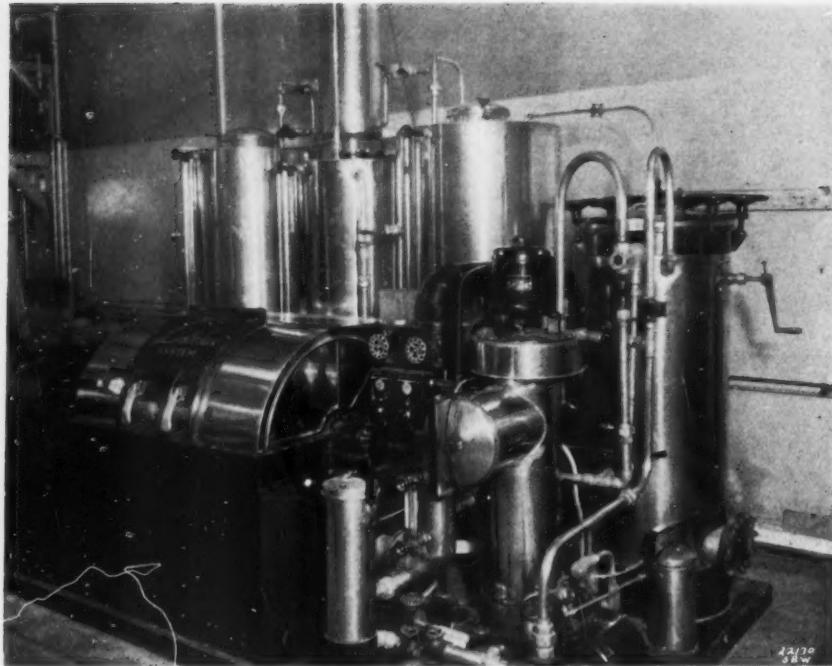
PETROLEUM solvents have for years found wide use in the dry cleaning field for two reasons,—they are cheap, and they are good solvents. Because they are widely used, most dry cleaning soaps have been designed for application in a petroleum solvent. Every maker of dry cleaning soap and every operator of a dry cleaning plant, however, is constantly aware of the main drawbacks of petroleum naphtha. They are the danger of fire and explosion, and high insurance rates. Hence the impetus which has been given in recent years to the use of various chlorinated solvents in dry cleaning. These solvents, finding ever widening application in other fields, are making very material headway in the dry cleaning field. They are equally as effective solvents as naphtha, and they are completely non-inflammable and non-explosive. They remove altogether the danger of fire from dry cleaning, but have the drawback of being considerably more expensive than petroleum naphtha. However, it is in conjunction with chlorinated solvents that more recent progress in dry cleaning soaps

By S. W. PUTNAM
Dow Chemical Company

has been made, and this is the line along which technical advances of the near future will undoubtedly follow.

Not many years ago, an executive of a company making dry cleaning soaps stated that he was instructing his salesmen to use every argument possible against the use of chlorinated solvents for dry cleaning purposes because their use would eliminate a large volume of business they enjoyed in supplying soaps to the naphtha cleaners. It is interesting to note this attitude of a few years ago and the attitude of the soap manufacturers at the present time. The use of chlorinated solvents for dry cleaning work has now become accepted by the dry cleaning industry and we believe we are correct in saying, by the dry cleaning soap industry as well.

This conclusion is based on the fact that a number of dry cleaning soap manufacturers are now marketing soaps for use with chlorinated solvents and the sales resistance offered by dry cleaning soap salesmen is now



This equipment is designed for use with chlorinated solvents in place of naphtha in the dry cleaning plant of the Munson Dry Cleaning Company of Detroit.

practically unheard of. Now that there is a meeting of minds on the part of the dry cleaning soap manufacturers, solvent manufacturers and the dry cleaning trade on the use of chlorinated solvents for dry cleaning purposes, it would seem there should be further cooperation between these groups, especially the first two, in the development of soaps that can be used with general satisfaction by the dry cleaning trade and to the satisfaction of the machine manufacturers. The purpose of this article is to bring to the attention of the dry cleaning soap manufacturers the opportunity which exists for service and profit, and the many reasons for the lack of endorsement of the present-day cleaning soaps now offered on the market for use with chlorinated solvents.

The first premise of major importance to be taken into consideration is the fact that out of more than thirty soaps investigated which are being offered regularly to the dry cleaners for use with chlorinated solvents, there has not been a single one examined that apparently has been anything more than the offspring from the old type of soaps which were designed for use with naphthas and other petroleum solvents.

In other words, the soap manufacturers have failed to take into consideration that they are dealing with an entirely different problem and one in which the characteristics of the chlorinated solvents must be taken into consideration. It must also be understood that it is impossible from a cost standpoint to follow the same methods of using soap with chlorinated solvents as it is with petroleum solvents. This is especially true with reference to the use of a strong soap solution together with a rinse, and the final discarding of a considerable volume of solvent contained in the strong soap solution. The difference between twelve cents a gallon for petro-

leum solvents and ninety cents a gallon for chlorinated solvents makes it imperative that the economics of the situation be considered.

The chemical characteristics of chlorinated solvents are entirely different from those of petroleum solvents and the resulting reaction between soaps which are apparently neutral to petroleum solvents may be decidedly affected by the chlorinated solvents. In view of the foregoing facts, a soap for use with any chlorinated solvent should have the following characteristics:

- (1) Completely soluble in chlorinated solvents and not separate.
- (2) Act as an inhibitor against corrosion rather than increase corrosion as do most of the soaps tested to date.
- (3) Not clog the type of filter used on machines designed for chlorinated solvents.
- (4) The solvent base of such soaps should be one or more of the chlorinated hydrocarbons.
- (5) Composition of the soap should be of materials that do not leave a residual odor in the garments even though no rinse takes place.
- (6) These soaps should be sufficiently active from a detergent standpoint to make it imperative that only a small quantity be used.
- (7) The soap must function as a soap and in addition must break down the electrical charges of dirt particles some of which are attracted to wools and silks.

A number of soaps sent in for testing have upon standing over a period of forty-eight hours showed very definite tendency to separate leaving a highly volatile inflammable solvent on the top layer and a thick, heavy

mass on the bottom. In a week's time these particular soaps had so completely separated that the top layer aside from coloring matter was almost free solvent. Upon mixing these soaps with different chlorinated solvents and observing them over a period of time, the difference in gravity brought to the top the same mass which had settled to the bottom in the soap sample itself. Upon testing these products in a reflex condenser with a metal strip immersed in the solvent containing the soap, and running up far enough into the condenser to provide for all conditions found in a practical dry cleaning unit, corrosion was increased about five times.

AN explanation of the method of testing for corrosion might be of interest to general soap manufacturers. An ordinary flask was assembled to a reflux condenser and the metal or metals to be tested suspended as indicated above. This provides information on the attack which might be encountered on the metal in the pure liquid phase, the liquid to vapor phase, the complete vapor phase, and again the vapor to liquid. It might be added that the liquid to vapor and vapor to liquid changes are normally the most critical points in connection with corrosion tests of any solvent. To the solvent is added ten per cent of water as in general dry cleaning work with chlorinated solvents some two to four per cent of moisture by weight of the clothes is taken out during the process of cleaning and of course, it has no other place to go than with the solvent.

Most cleaning machines have water separators which take out the water by means of gravity before it can

reach the still. However, with the rapidity of flow of the liquid, some water is carried over and other water in small proportion remains in solution in the solvent itself. The tendency toward hydrolysis or the formation of acid with chlorinated solvents is due to a number of conditions. One is the presence of moisture; two, the presence of an acid; three, presence of a catalyst, and four, high temperatures.

Any soap which is made up for any use where it may come in contact with metals should very definitely act as an inhibitor against corrosion rather than a catalyst for increasing corrosion. Any soap manufacturer would do well to run a series of ninety-six hour tests on known analyses of metals with various solvents under standard conditions in order to determine definitely just what the action or reaction is. About the only technique required in running this test is the very careful weighing of the metal strips both before and after the test in order to determine the milligram loss per square inch per twenty-four hours. In a number of soaps tested in dry cleaning equipment, it has been found that they increase priming in the still and carry over into the condenser and storage tank, and form films under which corrosion is exceptionally rapid. In some storage tanks the writer has observed streaks caused by foaming and under these streaks the metal layer was practically eaten through where in other places there was no indication of corrosion of any sort.

It would seem from the standpoint of the soap manufacturer that some research should be undertaken with



The washing room of a modern dry cleaning plant, showing washers along the sides of the room and centrifugal extractors in the center.

reference to the type of oils used in order to determine whether the metallic salts formed acted as either catalysts or inhibitors, and if the former, be discarded for the latter. Assistance is gained by the fact that the detergent value of a soap in chlorinated solvents need not be as active as in petroleum solvents.

By virtue of the fact that less soap is required per gallon of solvent with the synthetic solvents, the manufacturer can afford to put in higher priced ingredients if need be in order to have a superior quality material. One of the first requirements in this regard would be the use of non-inflammable solvents with the soap itself, at least to the extent that there is no flash at or around 100° F. Most of the soaps tested have had a very definite flash point at room temperature and many of them explosive tendencies at room temperature when tested in accordance with the specifications of the Underwriters' Laboratories. Soap manufacturers should take into consideration that when a dry cleaner is using a synthetic solvent machine he has completely eliminated fire hazard from his mind and consequently no precautions are taken around the plant as are always taken in connection with a naphtha system. The practice therefore of using an explosive solvent or inflammable solvent for making up a soap to be used in synthetic solvent machines adds a considerable amount of danger that would not be existent if the same material were used in a naphtha plant.

DRY cleaning machinery today consists of primarily three types of equipments: Recovery of solvent by distillation; recovery of solvent by filtration; and a combination of both filtration and distillation is used in many cases. For a soap to be entirely satisfactory to the dry cleaning trade it must be able to pass through the filter without having a tendency to fill the voids and thus build up pressure in the filter itself. This was not of primary importance in connection with the use of petroleum solvents where it was possible to use filters of much greater areas than is possible in connection with chlorinated solvent units. Further, the practice of using a strong soap solution in naphtha cleaning, which did not normally go through the filter but was eventually discarded, is not practical with chlorinated solvents and the equipment in which it is used.

Another problem which confronts the soap manufacturer is the removal of the soap from the solvent without causing an undue amount of sludge in the still itself. A quick-forming, heavy sludge necessitates cleaning the still very often or else definitely impairing the efficiency due to the low rate of heat transfer through the sludge which will accumulate on the bottom and sides.

On the theory that the solvent used in the soap should be carried over the column of the still regardless of the boiling point of the solvent for which the still is designed, then the most logical non-inflammable solvent to use would be chloroform. While technical chloroform is expensive when it is compared to other types of solvents, nevertheless it has some possibilities in this regard.

vided it is inhibited so as not to attack rayons. As is always the case, even the best materials have some drawbacks. For instance, from the corrosion standpoint in the presence of metals and moisture, tetrachlorethylene seems to stand head and shoulders above any of the other chlorinated solvents that are practical to use for dry cleaning soaps. However, this boils at 121° C. but with the short still columns which are used on practically all dry cleaning machines, this solvent in the quantities used in soap, would carry over by mechanical entrainment in sufficient quantities to be practical even in stills designed for lower boiling point solvents. It would seem possible that a very high boiling solvent that would not distil over, should be present in sufficient quantities to keep the soap residue in liquid condition in the bottom of the still to prevent carbonization and a thickening up to the point that the still residue will be very difficult to remove. In dry cleaning systems where a continual distillation takes place and no solvent runs through the garments except as it comes from the still, then the soap problem is comparatively simple, due to the fact there is a continual rinse after the introduction of the soap into the first washing. Many machines, however, do not have this provision and have batch distillation or partial distillation, and in such systems soap may build up in the fluid to the point that the garment will absorb some of the oils used in the soaps and leave a residual odor or develop rancidity after the clothes are cleaned.

VIEWED with a great deal of interest are some of the statements made with reference to the germicidal action of dry cleaning solvents as well as dry cleaning soaps. Most of the dry cleaning soap manufacturers have had sufficient experience with disinfectants to make it unnecessary to issue a warning regarding any claims of this kind for soaps or solvents. It is also interesting to note that in some of the soaps left standing in an open container of dry cleaning fluid, fungus growth from four to six inches in height took place on top of the solvent and soap over a period of a few weeks. Consequently, oils and materials should be found that if a small quantity is left deposited in the garment there would be no opportunity for either bacterial or fungicidal decomposition and the development of rancidity or foul odors.

As mentioned before, it is necessary to break down the electrical charges produced by static electricity and carried by the dirt particles some of which are attracted by wools and silks. The addition of a very small amount of soap of the right type breaks down these electrical charges and leaves the whites in a much whiter state than where these electrical charges are left unbroken and the microscopic dirt particles are attracted to the wools and silks giving a grayish appearance. This factor is probably of as great importance in connection with the use of soap for dry cleaning with chlorinated solvents as is any other factor. It has been definitely proved

(Turn to Page 63)

The cocoons of the silk worm carry about twenty per cent of their weight of sericin adhering to the silk fibre. The removal of this wax-like coating constitutes the all-important step of silk degumming.

SOAPS or EMULSIONS For Silk Degumming?

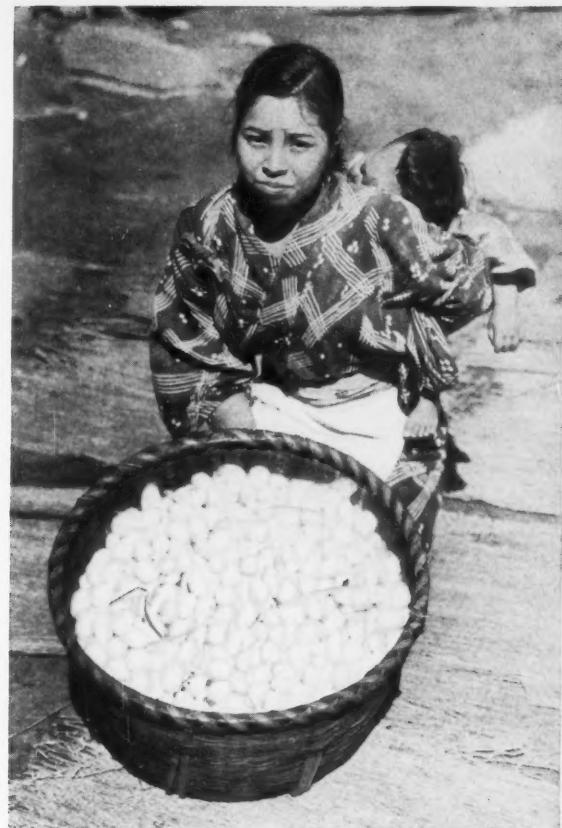
WHEN the silk worm spins his cocoon, he adds to the silk fibre some twenty per cent of a waxy substance commonly known as sericin. His silk manufacturing process is carried out to meet his own needs, and doubtless with no thought of the ladies who later wear his abode in the form of silk dresses and hose. Nevertheless, the very presence of this sericin in the raw silk, and the necessity of removing it in whole or in part, accounts for the many tons of soaps and associated materials which are sold every year for silk degumming.

Many years ago, it was discovered that olive oil soap was a very effective thing to use for the removal of this waxy sericin. The silk itself is termed fibroin and is wholly insoluble in water. The enveloping sericin, however, is somewhat soluble in hot water. The answer then is to soak the silk in hot water and dissolve away the sericin. But this procedure is altogether too slow for industry. It wants to do a better job and to do it more quickly, and this is where the soap comes in. It renders the sericin completely and quickly soluble. The olive

By J. F. SPRINGER

oil soap does the work and does it without injury to the fibre. But this is only a rough picture of the procedure. Were this the full picture with all the details, neither the silk manufacturer nor the soap supplier would have any problem of moment. The silk man could just boil up his raw silk long enough to take out the right amount of sericin to suit his taste, and the soap maker could just keep on making up the olive oil soap, and let it go at that.

In this modern day, there are a lot of complications. In the first place, we have more than one kind of natural raw silk. Then, we have a lot of differing artificial fibers, all kinds of rayons, for example. Then the boiling-off may be done at more than one stage of manufacture. You may boil-off hanks of raw silk in the hank or skein, just as you get them from Japan, or some other country. Or, you may boil-off sericin when the silk is in the form of knitted hosiery. Or, if you are a piece-goods manufacturer, you may want to get rid of silk gum



Ewing Galloway



Ewing Galloway

in the piece. When you bring in the newer artificial silks, you introduce still further complications. Naturally, the job may require a lot of variations in order to get the best results. It is not just a matter of boiling-off gum with a soapy water. If you are degumming hosiery or piece goods, you may, unless you watch your step, produce spotting of which the customer will not approve.

Natural silks differ among themselves not only in proportion of sericin, but also in other respects. However, consider for a moment at least this matter of the ratio of the gum to the fibroin. Here is a tabulation that is self-explanatory.

Raw Silks from Various Sources

<i>Origin</i>	<i>Color</i>	<i>Percentage of Sericin</i>
France	Yellow	24
France	White	21.5
Japan	Yellow	22
Japan	White	18
China	White	19
Canton (China)	White	22

There is a variation here of 33 1-3 per cent going from the minimum to the maximum. Naturally, then, there will be variations in the manner of carrying out the boiling-out. In the first place, the soap liquor is often preferably not boiled at all. This is especially the case when the degumming is done in the skein. The skeins are hung on rods, several skeins to a rod, and the silk dips down into the soap bath. Boiling is not wanted, not so much on account of the higher temperature, as because of the agitation set up by the boiling. This tends to tangle the silk threads. As ordinarily part of the skein is

Boiling off raw silk in Japan. The degumming process is still a rather primitive operation, not only in Japan, but in other parts of the world. It is more of an art than a science, although mechanical improvements and chemical control are making progress in the industry.

above the surface of the bath and part below, there is an inequality in the exposure to the soap, water, and other ingredients of the boiling-off liquor. No doubt, the vapor rising from the bath has some degumming effect, but it can hardly be equal to the liquor itself. In order to correct difference of exposure, the skeins are turned every now and then. But, even so, it is questionable whether there has been an absolutely even exposure all over the skein. Ordinarily, this may not be important, since the uneven parts will tend to distribute themselves over the fabric when the weaving or knitting is done and thus make themselves inconspicuous. However, we may regulate the amount of skein always under liquor. If the part above the surface is regularly one-third, and the part below two-thirds, perhaps we can make a fair job by regulating the amount of the turn, making it less than a complete turn. However, it does not seem that, even so, a 100 per cent perfect effect can be secured. If the final result desired is an even amount of residual sericin everywhere in the final fabric, it does not appear that this procedure of intermittently rotating the skeins is going to produce it. On the other hand, it seems that a mechanically rotating rod would handle the matter far more satisfactorily.

This mechanical rotation is in fact employed in a more up-to-date procedure. It may not be a better method from the point of view of degumming, but it is more modern in respect to equalization of exposure. This new method does not immerse the skeins in the liquor at all. They are suspended in such way and the upper level of the liquor so arranged that there is no contact. The degumming is done by the vapor and the froth. The equipment is completely covered. And violent boiling is provided by very actively heating the bath. Much foam is produced. Many mills are reported to have adopted this method. Here are two rather distinct methods of boiling-off silk in the skein. Which is better? Who can say? Nevertheless it is proper to suggest to soap makers that perhaps one soap is better for one procedure and another soap for the other.

PIECE goods may be degummed much in the same way that skeins are managed. That is to say, the piece is reeled into an endless loop. This loop is then managed by two men, each with a strong, smooth, flat stick, which is inserted through the loop. As the bath is usually a long one, the silk may be moved along its length and so find unexhausted parts of the bath. This procedure, from its resemblance to the method used with actual skeins, is sometimes called the "skein method". This appears to be a favorite process when degumming satin piece goods.

There are other procedures for the boiling-off of piece goods, but there is scarcely room to describe them.

Suffice it to say that soap manufacturers might do well for themselves by getting in further on this job of degumming silk, especially silk in the piece. How far will their soap solution penetrate when silk cloth is bunched together or fold lies flat up against fold? Where unsatisfactory results are obtained by the silk people, are they due to the soap or the mechanical arrangements of handling the silk, or some non-soap ingredient in the bath? A study may discover something that will help to improve the soaps and emulsions, or may discover something of a mechanical or chemical nature that is making trouble. And thus, the soap maker may clear his own product of suspicion, and solve a difficulty for his customer.

There has been, and still is, considerable controversy as to which is better, soap or special oils for the degumming operation. And it looks as if neither is going to oust the other. That is, each has its special field. First, let us consider the case of an important silk manufacturer who was using the one thing in 1929 and who is now using the other. These people have some 700 looms and manufacture broad silks, jacquard silks, velvets, etc. About 1929, they were using for degumming purposes an olive oil soap in the form of solid bars and were paying 9½c per pound. Now, they are employing instead a special emulsion for which they pay 11c. For their work, they seem to see but little difference, if any, from a technical point of view. Apparently, the major

(Turn to Page 69)



A type of mechanical dryer as used in the silk industry. After degumming or dyeing, the moisture content of the goods is removed by passage through the dryer.

reason for the switch was the fact that they could get the same results at a moderate advance in cost, and at the same time, get rid of the job of preparing the soap. Here we have the gist of the matter in a nut shell, insofar as this concern and its products are involved.

Their recipe for degumming of Japanese silk is interesting. Soap makers may find something of suggestive value, since this recipe gave satisfactory results. A solution for 1 bale of Japanese skein silk, 135 pounds, call for water—15 gallons, neatfoot oil—4 quarts, olive oil soap (bars to be cut into small chips)—4 pounds. These ingredients are boiled until all the soap has gone into solution.

A suitable tub is filled with some 80 gallons of cold water. Into this foundation bath, the solution as prepared above is strained and poured, the bath now amounting to about 95 gallons. A thorough mix is made. Heat the whole to 80°. Put 20 gallons into a separate container and reserve. The 75 gallons still in the tub constitute the bath for the boiling-off of the silk skeins. The bundles of silk are laid side by side until a complete layer is formed. Some of the solution is now poured onto the layer of bundles. Then another layer of bundles is placed and solution poured on. And so on until all the silk is in the tub. The foregoing procedure is followed for the purpose of getting a uniform distribution of the solution. Boards are now laid on top of the mass of silk and weights put on the boards to hold things just so. Everything is now left alone for the space of two hours. Test the silk to see whether it is still gummy. If it is, the soaking is still incomplete. A further half-hour may finish the job, however. At any rate, in this case silk is desired that has been soaked until no gummy feel remains.

The soaked silk is now freed from loose liquor by means of a centrifugal machine. Five minutes may suffice for this operation. Skeins are now taken out, well shaken and then put on racks for drying. There has been no boiling at all. Only a very moderate temperature. As to comparative costs as between soap and ready made emulsion, we must naturally remember that 9½c means 1 pound of solid soap, while the 11c means a liquid, each pound which contains water or the like.

Another company is an important silk manufacturing concern; and makes broad silks, Jersey cloth, acetate rayon, viscose rayon. They use various recipes for the boil-off baths. Olive oil soap in solid condition is employed. And so are various emulsions. They find both things good. At the same time, they show no signs of settling down to one to the exclusion of the other.

AMONG those who have weighed solid soap against emulsion is Noel D. White. Speaking of the degumming of silk fabrics, and particularly of hosiery fabric, he says: "After reading and listening to all arguments in favor of both [soaps and degumming oils] and after having given a fair trial in a practical way to soap as well as to many degumming oils, the writer has finally and conclusively decided that there is much to be said

in favor of both mediums; also, there are very definite reasons why both have a place in the dye-house, and either can be used to advantage according to the kind of fabric and the nature of the fibers contained in it. Water plays a very important part in this. Most dye-houses today have some system for softening or filtering water. But there are places where water is used raw from some stream, lake or spring or as furnished by the city and considered good enough to be used in the dye-house."

Mr. White continues: "In this case, the best medium for degumming is without question a degumming oil. Here the water cannot be relied upon to be the same all day and every day, and it would be hazardous to use even the best soaps. The danger of the soap breaking up and of impregnating the goods with pellets of a greasy insoluble nature would always be present to disturb the peace and equanimity of the dyer. With a degumming oil that would eventually be removed, consistently good work should be easily obtained. City water on the other hand is most always filtered at the city plant, but is liable to contain an undue amount of alum and the hardness therefrom varies to an alarming degree."

The same expert aquiesces in the use of soap for the degumming of silk hosiery, provided the silk is pure. Perhaps, indeed, he would allow certain other fibers to be admixed, but seems to draw the line at an intermingling of rayon. In using soap, there are certain precautions to be followed. It may be that the soap maker might be able so to prepare his soap as to dispense with some of the troublesome precautionary measures. That is for him to consider. "In degumming silk hosiery, it is always advisable to add to the bath some alkali to help saponify the lubricating agents used in throwing and knitting, and also to prevent a too rapid exhaustion of the soap bath. One per cent soda ash free from caustic, or double that amount of di-sodium phosphate, can be used to advantage. Four per cent of silicate of soda would be a very good adjunct. With it in the bath, the alkalinity is kept more constant, and if there should be any iron rust from the water tank, or any other source, in the water, the silicate will effectually prevent it from contaminating the goods in processing."

Where, however, the silk in the hosiery is admixed with rayon, he does not recommend soap. "When silk hosiery containing rayon has to be degummed, soap is not the best thing to use. Even if the water is of the best obtainable, the foreign matters contained in the rayon fiber are a menace that makes the danger of grease and spots always present. In this case, oils with which the rayon is impregnated, besides the emulsions used in throwing and knitting, will contaminate the bath and cause it to break down easily. A good degumming oil is much to be preferred. The boiling-off can be done even with hard water without much trouble, and if the right alkalinity is obtained in the bath, either through the oil or by adding some alkali, the dyer may secure good work on his goods. The selection of a good oil is, however, of the utmost importance."

A Half Century In POTASH SOAPS....



An Interview with

C. F. Young

President, Davies-Young Soap Co.

A HALF-CENTURY in potash soap manufacture has been completed this year by the Davies-Young Soap Company of Dayton, Ohio. For forty-seven of these fifty years, C. F. Young, the present head of the company, has been active in its affairs. In reality, the company from which the present business sprung was founded over ninety years ago in Dayton to manufacture lard oil. Today, C. F. Young is a widely-known character in the American soap industry, representing the potash soap interests on the board of the Association of American Soap and Glycerine Producers. Interviewed recently in Dayton by a representative of SOAP, he outlined the interesting points in the history of his company for the past fifty years.

The Davies-Young Soap Company had its origin in the Miami Lard Oil Works established by J. E. Pierce in 1844. Producing only lard oil, a product used widely for lubrication in those days, it continued and prospered. A new owner appeared in 1872, J. P. Davies having bought the business from his uncle. It was in

1885 that soaps were added to the business, and the Buckeye Soap Company was formed to manufacture and sell soaps. This new venture proved a wise one for the company, for the use of lard oil had already found keen competition from the new petroleum industry. This competition grew, and from 1885 the use of lard oil dwindled to the extent that its production was discontinued in 1909.

In the meantime, the Buckeye Soap Company had entered into the production of laundry bar soaps and oil soaps. But another type of soap was gaining popularity, and in 1891 the manufacture of laundry bar soaps was discontinued. The plant was re-arranged, new equipment was installed and the Buckeye Soap Company became the first manufacturer of chip soaps west of the Atlantic seaboard. Buckeye Borax Chip Soap soon came into general use over the entire country, and was distributed from 45 warehouses.

At the same time Buckeye Cleanser Oil Soap was increasing in use. Long before the first automobile





R. H. Young



H. G. Young



E. G. Eckerman

sputtered along the road, Buckeye Cleanser was cleaning the harness and brightening buggies and barouches all over the country. With the more general use of the automobile, Buckeye Cleanser increased in demand. Full page advertisements appeared in all the motor magazines. Buckeye Cleanser was standard equipment with many cars, and automobile dealers sold Buckeye Cleanser. This was before the days of the "auto laundries".

One of the chief reasons for the wide acceptance of Buckeye Cleanser was the generous use of advertising by C. F. Young, who had entered the employ of The J. P. Davies Company as office boy in 1888, soon to become a clerk, copying sales letters in longhand . . . bookkeeper . . . salesman . . . salesmanager . . . and in 1913, when Dayton was covered by the flood waters of the Miami River, he was vice-president and general manager.

It was a sorry sight that met his eyes when the waters of the Dayton flood had receded. The flood had reached the second floor of the old factory along the canal. Ledgers were covered with mud, records obliterated entirely in some instances, fish wriggling in the basement. But they dried out ledger sheets, dug out equipment, and went back to work. Mr. Young recalls pleasant memories

Russell Young is vice-president in charge of oil soaps, liquid soaps, and hand soaps, having joined the firm in 1922 upon graduation from Miami University. H. G. Young who joined the firm recently assists him in sales work. Ed Eckerman is completing 25 years with the firm, having started in 1911. He is in charge of dry cleaning and laundry product sales.

of friends and customers coming to his aid, many of them sending checks to balance accounts, the records of which were irretrievably lost.

But the flood marked the advent of The Davies-Young Soap Company. C. F. Young formed The Davies-Young Soap Company on August 1, 1914, buying the assets of the old J. P. Davies Company. The company was moved to a one-story and basement building. It, too, had gone through the flood, and the basement had been filled with corrugated paper. This paper had swelled, and had to be dug out with picks and shovels. The building cleaned, equipment was installed, and operations begun. The chip soap in the warehouses was sold, and production was limited to oil soaps, liquid soaps, and dry cleaning soaps. A chemist was placed in charge of manufacturing, and new products were rapidly developed. Buckeye Cleanser remained one of the chief products, carrying on the old company's brand.

At this time, C. F. Young was general manager, president, plant superintendent, advertising manager, and sales manager. He was the first person to use an Ediphone in business in Dayton. His many duties made it essential for him to make use of every device that would save his time, and he averaged from twelve to eighteen hours a day at his work.

With the growth of the business, more space was essential, so a second story was added to the factory. The war came, and with it an increased demand for all products, including potash soaps. Production ran more than 2,000 barrels of soap behind. One jobber wanted a tank car of liquid soap, laying the cash on Mr. Young's desk. Another wired an order for 1,000 barrels of oil soap. The soap business became a production problem entirely.

But throughout this frenzied period, Mr. Young gave precedence to the orders from his old customers, turning down big orders that would interfere with regular shipments, and refusing steadfastly to expand his plant and equipment to permit him to meet a demand that he was certain was only temporary. As a result, the company was not overexpanded when this unnatural demand collapsed at the end of the war.



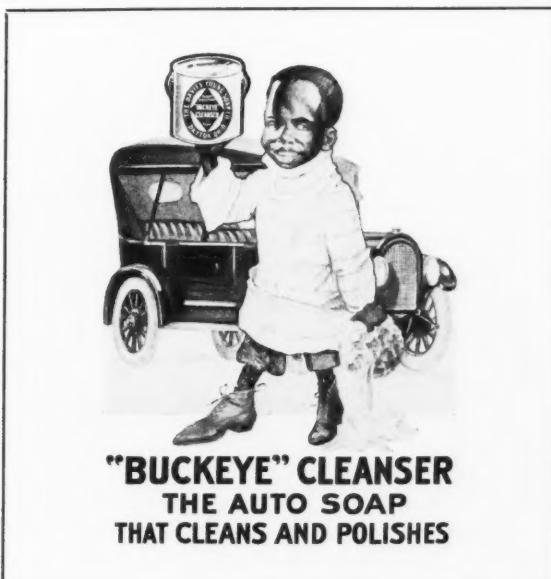
Most of the present Davies-Young employees have been with the firm for many years. Ed Blind (center) started with the company over forty years ago.

THE business continued to grow. Again the factory space proved too small, and a two-story and basement addition was built. This sufficed until 1928, when another building was erected to house the manufacture of dry cleaning soaps and allied products, and a new boiler room was constructed. By then, the work had long since become more than one man could do, and in 1921, Mr. Young brought in an assistant to help him with the sales work. A year later, Russell H. Young, the oldest son, entered the factory. His start in the business was in the shipping room, rolling barrels about, then the laboratory, the kettle room, traffic department, advertising, buying, and finally in the sales department.

E. G. Eckerman came into the office in 1928, having started with Mr. Young in 1911. Today he is in charge of the dry cleaning and laundry department sales, directing a nation-wide sales organization. R. H. Young, assisted by H. G. Young is in charge of the sales of oil soaps, base soaps, liquid soaps, and hand soap. From the start of the business, Davies-Young has maintained a policy of selling to jobbers only.

MR. YOUNG was asked the customary question. "To what do you attribute the success that you have had in building up the largest production of potash soaps in the country?"

His answer was characteristic of him, "I suppose that I should reply with the usual answer,—hard work. Of course it takes work and attention to business. Every business requires that. But such success as we have achieved is due to many reasons, chief of which is the loyalty of every one in the organization, from the boy in the sample room to the oldest salesman on the road. We have men working for us today that have been with me for 45 years."



Old cut used to advertise automobile soap over twenty-five years ago before the days of auto laundries.



George Ostheimer who started with the old J. P. Davies company is rounding out his 46th year with Davies-Young.

"Perhaps the second reason is the fact that we early recognized the need for real laboratory control of our manufacturing processes. This business is not a 'rule of thumb' business any more,—hasn't been for many years. We've insisted on uniform products, and we developed an organization to produce them. When any one of our salesmen shows a sample, he knows that the product must be right, and furthermore that the product as shipped will conform to the sample exactly.

"And we enjoy our work! We know that we will never be big, for the potash soap business is really a small part of the entire soap business. We are content to go ahead, developing products to meet new demands, and working constantly on problems that affect us and our jobbers.

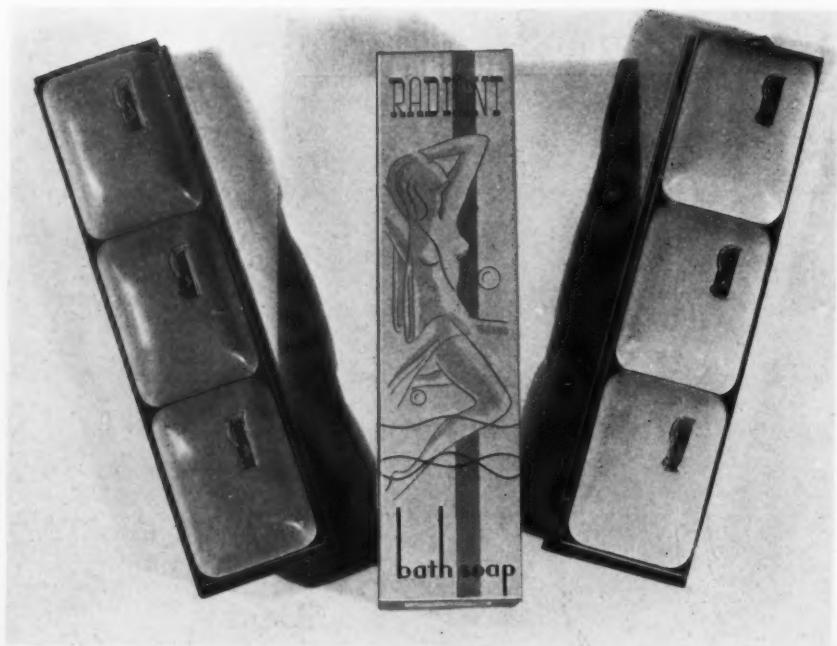
"I don't know what else I can say, except that we have appreciated more than I can tell you the loyalty of our customers throughout the country during all these years. I've used that word 'loyalty' before, but it can't be repeated too often. It's one reason that we have to keep on our toes,—we must and will continue to deserve that loyalty on their part."

And that is a brief history of the Davies-Young Soap Company as it completes a half century in the manufacture of potash and other soap products. Innumerable interesting stories are told by Mr. Young of the trials and pleasure of the business,—how prices varied widely through the years, how coconut oil soap base sold for 24 cents per pound in 1919, how prices broke in 1921 and how he took his loss when the bottom dropped out of the raw material market,—stories enough to make a book. Although Mr. Young is still the active head of the company, supervising all parts of its management, his sons, Russell and Howard Young, and Mr. Eckerman, have become increasingly important factors in the management in recent years.



New Products

Stop Spot, the new cleaning fluid of Union Oil Company of California, in striking black glass bottle with silver label band and bright red plastic cap. Patented plush applicator top by Double Duty Products of Cleveland. Bottle by Brockway Glass Company.



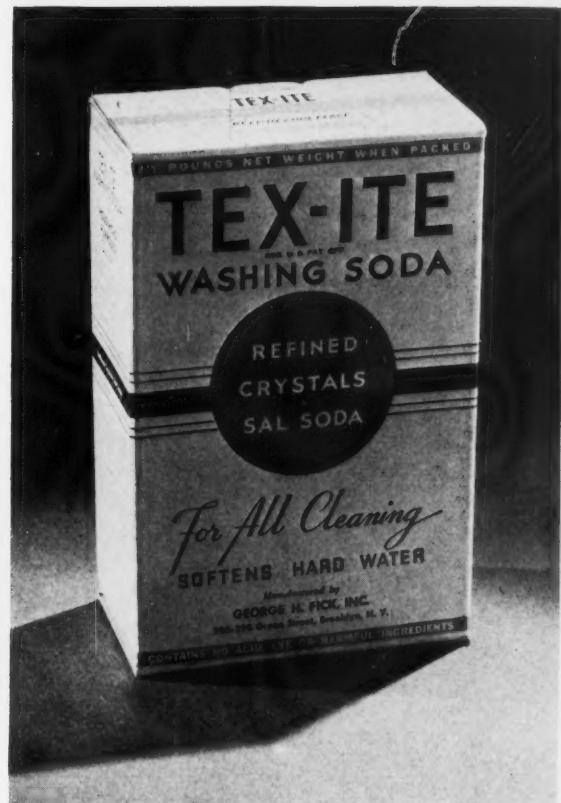
Radiant Bath Soap,—a new line of bath soap by the Hewitt Soap Company of Dayton, Ohio, packed three to a box in six colors and odors to match,—each cake carrying an individual label similar to the box design.

and Packages



Gulf Gleam Furniture Polish, a new product of the specialties division of Gulf Refining of Pittsburgh appears in a new stock design bottle by Owens Illinois. Distinctive label and black composition cap complete an attractive package.

Two new items by the Black Flag Company of Baltimore in three-color matched packages. Frey's Flea Powder in fibre can by American Can with metal sifting top, and vermifuge in standard carton and bottle.



Texite Washing Soda, offered as an all-purpose cleaner and water softener by George H. Fick, Inc., Brooklyn in a new simplified dispensing package designed and manufactured by Robert Gair Company.



GRASSELLI T.R.I.-S.P. H.A.T.

good

T.S.P.

GRASSELLI Tri-Sodium Phosphate is standard for general cleaning purposes. It has fairly won its reputation as *GOOD T.S.P.*—for 6 definite reasons:

1—Quality backed by 97 years of chemical experience; *2—a process* permitting Grasselli T.S.P. to *cure* (hence it is free flowing); *3—five grades*—fines, globular, medium, coarse, and flake; *4—almost instantly soluble* in water

making hard water soft; *5—non-sifting packages*—barrels with paper liners, also fibre kegs and bags; *6—Twenty branches* and warehouses to serve you—quicker delivery—complete stocks—economy of freight rates.

That, in a nutshell, is why *Grasselli Grade* is known as *good T.S.P.*—and *good Service*. Prove it to yourself—try it.

Let Us Also Quote You On

- Silicate of Soda
- Caustic Soda
- Soda Ash
- Carbon Tetrachloride
- Paradichlorobenzene
- Sodium Fluoride

THE GRASSELLI CHEMICAL COMPANY, Inc. FOUNDED 1839 CLEVELAND, OHIO

New York Office and Export Office: 350 Fifth Avenue



ALBANY CHARLOTTE DETROIT NEW ORLEANS ST. LOUIS
BIRMINGHAM CHICAGO MILWAUKEE PHILADELPHIA ST. PAUL
BOSTON CINCINNATI NEW HAVEN PITTSBURGH
SAN FRANCISCO, 584 Mission Street LOS ANGELES, 2260 East 15th Street



Represented in Canada by CANADIAN INDUSTRIES, LTD., General Chemicals Division—MONTREAL and TORONTO

GRASSELLI GRADE

A standard held high for 97 years

ENJOIN COCONUT TAX PAYMENT

Attorneys for Haskins Bros. & Co., Omaha, appeared before Justice Jennings Bailey of the Supreme Court of the District of Columbia, December 30, seeking a permanent injunction to prevent payment to the Philippine Government of money collected under the tax of 3c per pound on coconut oil imported from the Philippines. A temporary restraining order had already been granted under date of December 19.

A sum of approximately \$100,000 is involved, and the Haskins attorneys argued that while claim for a refund had been made, it would be impossible to recover if the money was paid to the Philippine Commonwealth.

It is estimated that domestic users of coconut oil have paid a total of approximately \$25,000,000 under the 3c tax, disposition of which will all be affected by the decision in the Haskins case. The suit challenges the constitutionality of the tax on the grounds that the United States has no power to tax for the benefit of another government.

There is still pending in the U. S. District Court for the Southern District of Iowa an application for an injunction against the Collector of Internal Revenue to prevent collection of the tax. This action was brought by Iowa Soap Co., on similar grounds of unconstitutionality. Hearings have been held, but as yet there is no report as to the decision of the Court on granting the injunction.

LEVER BUILDING PLANT ADDITION

Construction has been started by Lever Bros. Co. on a new \$2,000,000 vegetable shortening plant at Hammond, Ind., as the first step in an expansion program which is eventually expected to involve expenditure of \$6,000,000. It is reported that a new six-story office building is planned, as well as additions to the Hammond soap plant, palm oil, coconut oil and tallow refineries. Stone & Webster Corp., Boston, will erect the new plant additions. It is expected that about a year will be required for completion of the first unit which will be used for manufacture of the new Lever lard substitute, "Covo".

C-P CANADA EMPLOYMENT AT PEAK

Employment in the Canadian branches of the Colgate-Palmolive-Peet Co. of Canada, Ltd., is at the highest point in the history of the company, even surpassing the peak year of 1929, according to C. R. Vint, vice-president and general manager. Not only is present employment ahead of 1929, but it is over 31 per cent more than the level for 1933. For the fourth year in succession, according to Mr. Vint, the company will expand its advertising schedule in Canadian papers and magazines, the opinion being held that widespread advertising has been the most important factor in the increase in Canadian business.

Chicago Trade Notes

George Wrisley of the Allen B. Wrisley Co., Chicago, was elected president of the Chicago Perfumery, Soap and Extract Association at the annual business meeting held December 27th at the Hamilton Club. Other officers elected were T. E. Hanshaw of the Thayer Pharmacal



George Wrisley



J. H. Helfrich

Company, vice-president and M. B. Vance of Givaudan-Delawanna, secretary and treasurer. The report of the secretary and treasurer was read by Kedzie Teller who is retiring from office after six years of service to the association. Report of the entertainment committee by M. B. Vance and of the bowling committee by Paul Pettit were also heard. John S. Hall, attorney for the association, talked briefly regarding legislative matters. The association has just completed one of its most active and successful years and a marked gain in the number member companies has been shown. In behalf of the members of the association Dudley Lum presented J. H. Helfrich, the retiring president, with a gladstone bag.

The annual Christmas banquet of the Chicago Drug and Chemical Association was held at the Stevens Hotel on December 19th. The evening which was featured by the presentation of the gift bags was voted a complete success by the more than 280 members who were present. A. J. Rocca and L. H. MacDougall were in charge of all plans for the party.

Thomas Galvin of The Armour Soap Works, Chicago, was the featured speaker at the December 12th meeting of the Affiliated Sanitary Supply Distributors of Chicago. Mr. Galvin gave the members some interesting information regarding the manufacturing and marketing of the various types of soaps which the sanitary supply houses sell. The regular monthly reports showed that the average business gain by the member companies for the month of November in comparison with November, 1934, was 19.2 per cent while the average gain for the first eleven months of the year was 17.8 per cent. The January meeting was held on the 14th.

Let us
help you



improve your Package

Some well known
soap manufacturers
who use our machines

B. T. Babbitt, Inc.

Colgate-Palmolive-Peet Co.

The Cudahy Packing Co.

Gold Dust Corp.

The Andrew Jergens Co.

James S. Kirk & Co.

Kirkman & Son

Lever Bros. Co.

Procter & Gamble Co.

Swift & Co.

Allen B. Wriskley Co.

Today's competition places a heavier task on your package than ever before, because competition is pushing it harder and harder. It must do a strong selling job. But at the same time packaging costs must be kept at a minimum.

To meet both these requirements calls for expert knowledge, embracing not only the sales angles of packaging, but the production problems as well. This is where the Package Machinery Company has given valuable assistance to others and may be able to help you.

Broad Scope for Developing Ideas

Working with all types of wrapping materials, and with a wide knowledge of modern packaging trends and methods, we have extremely broad scope for developing ideas. Most important of all, you are assured that the new package will be suited to low-cost machine production.

Our machines are sufficiently flexible and are made in so many different types that we usually have a model that can readily be adapted to individual requirements.

Why not put our long experience and ability to work for you, to see what we can do to improve your package or lower your costs? Consultation obligates you in no way. Get in touch with our nearest office.

PACKAGE MACHINERY COMPANY

Springfield, Massachusetts

NEW YORK

CHICAGO CLEVELAND

LOS ANGELES

MEXICO, D. F., Apartado 2303

Peterborough, England: Baker Perkins, Ltd.

Melbourne, Australia: Baker Perkins, Pty., Ltd.



PACKAGE MACHINERY COMPANY

Over 200 Million Packages per day are wrapped on our Machines

E. L. King, of J. R. Watkins Co., Winona, Minn., who is wintering with his family at Ormond Beach, Florida, writes that thus far the climate has not offered much relief from the wintry blasts.

The annual Christmas dinner dance of the Chicago Perfumery, Soap and Extract Association at the Knickerbocker Hotel, December 12th, drew a crowd of record proportions. The evening was marked by the music of Tom Owens and his Cornhusker orchestra and entertainment by radio stars from station WLS. M. B. Vance and C. A. Hammond were co-chairmen of the Entertainment Committee, handling arrangements for the party and the distribution of souvenir bags for the ladies.

George L. Simmonds of U. S. Sanitary Specialties Corp., Chicago, sailed recently from New York on the S. S. Tongsholm for an extended southern cruise. Mr. Simmonds expects to visit the West Indies, Leeward Islands, Cuba, Mexico and South America and will probably return about March 1st. During Mr. Simmonds absence the company will be in charge of Harold L. Aronson, vice-president.

The annual sales meeting of the H. D. Hudson Manufacturing Co., Chicago, was held the week of December 30th in Chicago. Sales and merchandising plans were discussed by company officials and models of a new improved line of sprayers, which will be announced to the trade in the near future, were shown.

Federal Varnish Co., Chicago, manufacturers of floor preparations, have just published a manual on floor finishing and maintenance which will be placed in the hands of all jobbers marketing floor preparations. The book, which is well illustrated, gives information for treating and maintaining all types of floors and can be obtained by writing to the company.

Company Duval, New York perfuming material house announces that L. A. Barber, formerly with Ungerer Co. is now their sales representative in the metropolitan territory. Mr. Barber was associated with Company Duval several years ago, prior to becoming connected with Ungerer.

Compagnie Parento, Inc., New York, has been appointed sole representatives both in United States and Canada for P. K. Shipkoff & Company, Kazanlik, Bulgaria, distillers of Otto of Rose. Shipkoff's Otto of Rose will be stocked at the company's New York warehouse, other branches throughout the United States and at the Toronto branch. Mr. Shipkoff recently visited America.

Century Products Co., manufacturers and jobbers of soap products, have leased the building at 20 East 39th St., Kansas City, Mo., and are now located there.

SOAP INDUSTRY MEETS JAN. 30

The ninth annual meeting of the Association of American Soap & Glycerine Producers will be held at the Biltmore Hotel, New York, on January 30, beginning at 1:30 P.M., according to an announcement from Roscoe C. Edlund, manager of the Association. Although the meeting is one of the Association, and new officers and directors for 1936 will be elected, the meeting will be open for attendance by any representative of a soap manufacturer whether the company is a member of the Association or not, Mr. Edlund states. Numerous general problems of the soap industry, of interest to all manufacturers, will come up for discussion. The nominating committee which will report a slate for 1936 directors, who in turn elect the officers, consists of S. Bayard Colgate of Colgate-Palmolive-Peet Co., chairman, and N. S. Dahl of John T. Stanley Co., S. S. Fels of Fels & Co., and I. Katz of J. Eavenson & Sons, Inc. Matters to be discussed will include the coconut oil excise tax, the Guffey-Detweiler Bill, the Maine Cosmetic Law, and the new proposed census of soap and glycerine sales.

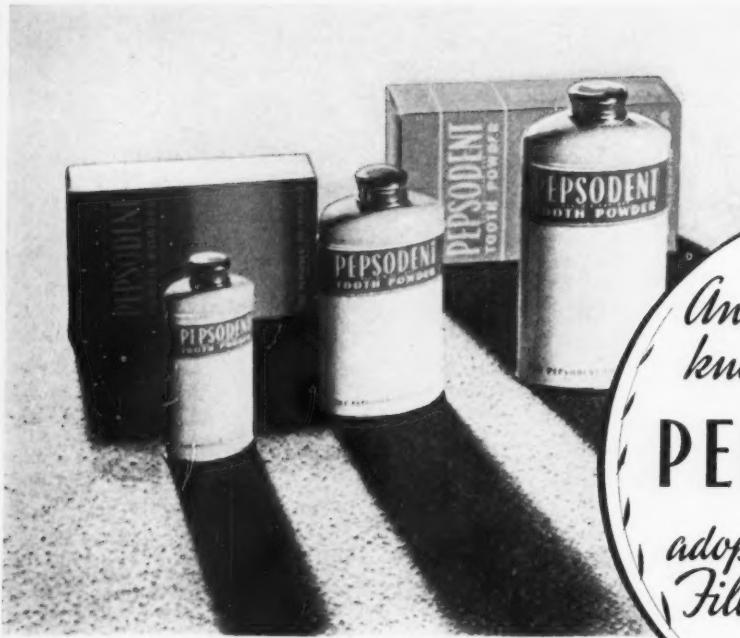
Frederick P. Beaver, former head of the Beaver Soap Co., later merged in organization of Beaver-Remmers Graham, died at his home in Dayton Ohio, January 4th. Mr. Beaver, who was long a prominent figure in Dayton educational and religious activities, was ninety years old. Beaver-Remmers Graham Co. plant at Dayton was taken over several years ago by the Cincinnati Soap Co. who are at present manufacturing there.

Ernest Vetterlein, vice-president and treasurer of P. R. Dreyer, Inc., New York, essential oils, has resigned this position to join Norda Essential Oil & Chemical Co., New York. Mr. Vetterlein has been with the Dreyer organization for thirteen years, working under the late P. R. Dreyer for a considerable period and joining with F. C. Theile in taking over active management of the firm after the death of Mr. Dreyer.

Bernard L. Marks, in charge of development and sale of toilet soap with J. Eavenson & Sons, Inc., Camden, N. J., for the past ten years, has just been appointed sales manager for the Lightfoot-Schultz Co., Hoboken.

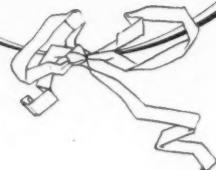
B. T. Babbitt, Inc., New York, has appointed the New York office of Blackett-Sample-Hummert, Inc., for all advertising of "Bab-O" cleanser. The agency has been handling part of the account.

Howard H. Hopkins, Bristol-Myers Co., died last month at the New York home of his brother, Charles T. White. Mr. Hopkins, who was thirty-two years old, had acted as assistant to Lee H. Bristol, vice-president of the company, and in addition had served as advertising manager for several Bristol-Myers products.



Another nationally known product.

PEPSODENT *adopts Stokes & Smith Filling Equipment*

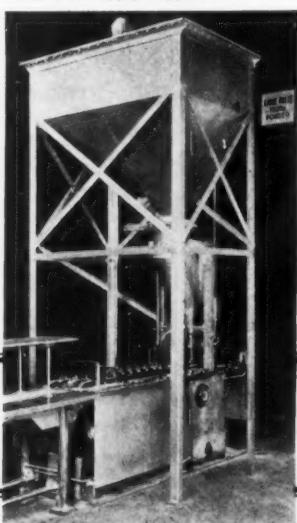


When Pepsodent Manufacturing Co. decided to package tooth powder in addition to Pepsodent Tooth Paste, they investigated various types of filling machinery and—adopted Stokes & Smith Equipment.

The Powder Filling Lines in the Pepsodent Plant each employ an S & S Automatic Filler. Each machine has accurate, auger filling stations with conveyors. All are readily able to fill any of the three different sized packages at speeds as high as seventy packages per minute.

Why not investigate Stokes & Smith Equipment for your product? There is a wide choice, running from the simplest semi-automatic machinery for limited production to complete, high speed, fully automatic lines for mass production. Write for literature.

One of the Pepsodent Powder Filling Lines showing S & S Duplex Automatic Filler with supply hopper.



STOKES & SMITH CO
PACKAGING MACHINERY PAPER BOX MACHINERY
4915 Summerdale Ave., Philadelphia, U. S. A.
British Office: 23, Goswell Road, London, E. C. 1

FILLING MACHINES—CARTON FILLING AND SEALING
MACHINES—BAG AND ENVELOPE FILLERS AND SEALERS—
TIGHT-WRAPPING MACHINES—COMPLETE PACKAGING LINES

TAKE SOAP SALES CENSUS

An accurate soap sales census is the aim of the Association of American Soap & Glycerine Producers in gathering figures from all firms of the industry on soap, soap products, and glycerine sales. The census which is now being taken, based on the figures for 1935, was authorized by the directors of the national association after careful discussion, states Roscoe C. Edlund, general manager. The object is to have an accurate picture of the trend in soap sales by manufacturers and soap consuming habits of the public. Every precaution will be taken to keep the information gathered strictly confidential. No individual figures will be made public under any conditions, and only product group totals will be available to the firms who supply data for any particular group. None of the figures will be available for publication at any time. The Association urges all firms who have not received census blanks to communicate with its office at 381 Fourth Ave., New York, at the earliest possible moment. The last date for the receipt of figures for the current census is Jan. 20.

Incorporation papers for the Metro Research Laboratories, Inc., New York, have been filed by Safir & Kahn, 521 5th Ave.



Fels & Co., Philadelphia, famous for many years for the Naptha Soap in bar form, bring out a new Naptha Soap Chip in a package with pouring spout. The first and only "naptha" soap chip on the American market is a thin, yellow chip the color of Fels Naptha bar soap.

SHAMPOOS EXEMPT FROM MAINE LAW

Shampoos and mechanics' hand soaps are exempt from the applications of the Maine Cosmetic Law if they are wholly soap products designed to perform the cleaning service of a soap, and do not claim cosmetic properties, according to an opinion by Davies, Beebe, Busick and Richardson, attorneys for the Association of American Soap and Glycerine Producers. A communication on this subject from them, recently made public by Roscoe C. Edlund, general manager of the Association, states:

"Under Section 3 of the Maine Act, all household and toilet soaps are excepted from classification as cosmetic preparations, unless such soaps are represented as preparations for the treatment of disease. We think it, therefore, follows that all shampoo preparations which are soaps and are intended to serve a legitimate soap purpose, are likewise excepted from classification as cosmetic preparations. Shampooing the hair, we think is a household and toilet purpose and, therefore, a soap preparation adapted for that purpose would be included within the exception in the Act. If, however, the shampoo preparation was so compounded that it could not be classified, fairly, as a household or toilet soap preparation, then it would not be within the exception. A shampoo soap preparation is entitled to perform all of the services, and to present all of the uses, which household or toilet soaps should and do present. If it goes beyond this field and contains ingredients, cosmetic in their nature, then the question would arise whether the article had not become something other and different from a soap preparation.

"The answer to your inquiry would be determinable upon the character of your shampoo product. If it comes within the scope above suggested, we do not think you need pay any attention to the Maine law, as it would not apply to your product. Not knowing the facts with respect to the nature of your product, we cannot advise you further. The foregoing will likewise apply to the applicability of the Maine statute to hand cleaners. If such hand cleaners are fairly a soap preparation, they are excepted. If not, they would probably be included.

"There does not seem to be in the release from the Maine authorities, any suggestion that it is the intention of such authorities to apply the act to soaps, shampoos or soap hand cleaners. We are inclined to think that these authorities will not so apply the law and, consequently, we do not think at this time there is any necessity for legal action to secure a ruling on the statute. If the Maine authorities should act to require registration of one of your soap products, then, in our opinion, would be the proper time to consider institution of legal proceedings along appropriate lines."

New rules governing the sale of denatured alcohol have just been announced by the U. S. Treasury Department. It is provided that sellers must report detailed information as to shipments when requested by the Commissioner of Internal Revenue.

WARNER

Quality

PIONEERED FOR NEARLY 50 YEARS

CAUSTIC SODA

HIGHEST GRADE
(ELECTROLYTIC)

IN EITHER
FLAKE, SOLID OR LIQUID FORM

**CARBON
TETRACHLORIDE**

REDISTILLED WATER-WHITE
SUPPLIED ALSO IN COMBINATION WITH
OTHER SOLVENTS TO MEET
INDIVIDUAL REQUIREMENTS

EARLIEST PRODUCTION IN THIS COUNTRY
**TRI-SODIUM
PHOSPHATE**

FIRST PRODUCER OF A FREE-FLOWING
AND NON-CAKING PRODUCT NATION-
ALLY KNOWN FOR ITS UNIFORM
QUALITY

**TETRA SODIUM
PYRO PHOSPHATE**

AN OPPORTUNITY TO SUBMIT SAMPLES
AND QUOTATIONS IS SOLICITED



WARNER CHEMICAL COMPANY

Pioneer Producers 1886

CHRYSLER BUILDING
155 EAST SUPERIOR STREET, CHICAGO

NEW YORK CITY
70 RICKARD STREET, SAN FRANCISCO

DIVISION OF WESTVACO CHLORINE PRODUCTS.

PERSONAL AND IMPERSONAL

S. Bayard Colgate, president of Colgate-Palmolive-Peet Co., has been named a vice-president of the National Association of Manufacturers for 1936.

Royal Soap Co., 505 West 5th St., Kansas City, Mo., are planning an expansion in 1936, according to G. E. Pritchard, president of the company. This company is two years old, but has made decided progress. They will add considerable new equipment and expand their sales force. They manufacture laundry and granulated soaps.

William Kropff, founder and for fifty-three years head of Muhlens & Kropff, New York, and afterwards Ferdinand Muhlens, makers of "Eau de Cologne," died recently. He was eighty-three years old. Mr. Kropff had been very active in organized toilet goods association work.

Viscount Leverhulme, governor of Lever Brothers, Ltd., was recently granted a decree *nisi* in the London Divorce Court. Justice Langton exercised his discretion in favor of Viscount Leverhulme who is to marry shortly Mrs. Winifred Morris, correspondent. There was a cross-petition for divorce by Lady Leverhulme. Lord and Lady Leverhulme were married in 1912 and have three children. The cross-petition of Lady Leverhulme was dismissed.

Andrew Jergens Co., Cincinnati, started to market its Jergens Lotion with the new "Smooth-Flow Top" beginning January 1. The new top, made of a hard rubber composition, is designed to eliminate the stickiness which accumulates on the ordinary bottle. Announcement to the public will be made through the Jergens radio program January 19.

Augustus B. Byam, retired soap manufacturer, died at his home in Somerville, Mass., recently at the age of 86. He headed the firm of Ryan & Byam for a number of years prior to his retirement in 1905.

Georg Schicht A. G. (The Schicht Works), Aussig, Czechoslovakia, a large producer of soap and cosmetics, and a member of the Unilever Concern, is working at only about 40 per cent of capacity and is barely making a profit, according to a report to the U. S. Dept. of Commerce. About 2,000 factory and 800 office workers are employed and modern equipment is used. Practically the entire output is sold in Czechoslovakia, the company doing little export business.

Members of the Association of Canadian Perfumers and Manufacturers of Toilet Articles met last month at the Royal York Hotel, Toronto, Canada, for the annual winter convention of the association. The principal business of the session was a discussion of the 10 per cent Canadian excise tax, which added to the regular Canadian 6 per cent sales tax, is proving a heavy burden to Canadian manufacturers of toilet preparations.

The attempt of Procter & Gamble Co. to prevent registration by Crescent Supply Co., Marietta, Ohio, of the mark "Cresco" for lubricants has met with failure in a recent decision of the U. S. Court of Customs and Patent Appeals. The opposition by P & G was based, of course, on its ownership of the mark "Crisco" for cooking fat. The opinion of the court was that since the two products described are not in the same field, confusion in the trade is not likely to result from use of the two marks.

Cecil Smith of Yardley, New York, has been named chairman of the legislative committee of the Toilet Goods Association, succeeding Arthur E. Johnston, resigned.

Mrs. Rena Dahl, wife of N. S. Dahl, general manager of the John T. Stanley Co., New York soap manufacturers, died January 5 at the Methodist Episcopal Hospital, Brooklyn, following an operation. The mother of Mrs. Dahl, Mrs. Katherine MacInnes, died on the day following from heart failure due to the shock of her daughter's death. Services were held at the Dahl home, Jan. 9, and interment was in Greenwood Cemetery, Brooklyn.

Admiracion Laboratories, Inc., Harrison, N. J., has announced new package sizes for "Admiracion" shampoos. Full pints will retail at \$1.25, 1/2 pints at 75c, 1/4 pints at 45c and a trial size at 15c.

Maryland Agencies, Inc., 106 West Redwood St., Baltimore, has recently been formed by Joseph C. Miller, L. Dudley Miller and Joseph J. Ruppert to deal in soaps, perfumery, etc.

The entire fleet of tank cars of Procter & Gamble Co. has been taken over by the General American Transportation Corp., it was announced last month. It is understood that approximately 1,000 cars are involved in the deal. The companies have also entered into a long term contract under which General American Transportation will fill all the P & G tank car requirements.

THE *Manufacturing* CHEMIST

PHARMACEUTICAL COSMETIC
& PERFUMERY TRADE JOURNAL

Embracing the Manufacture of Drugs, Pharmaceuticals, Cosmetics, Toilet Preparations, Photographic Materials, Soaps, Fine Chemicals, Essential Oils, Perfumes, Dental Preparations, Patent Foods and Medicines in Liquid, Powder, Paste, Pill and Tablets, Polishes, Antiseptics, Germicides.

- Foot Preparations, by Dr. Zernick and Dr. Light.
- The Value of Salts in Dentifrices, by Karl Pfaff.
- The Acid Stomach, by F. C. Hobart.
- Indigestion Remedies.
- Eye Preparations, by M. G. de Navarre.
- Transparent Foils, by Dr. Louis Light.
- The Perfume of the Hyacinth, by H. S. Redgrove.
- The Malaria Scourge, by Dr. Konrad Schulze.
- Notes on the Manufacture and Testing of Contraceptives, by Dr. C. I. B. Voge.
- The Production of Stable Emulsions, by G. H. Wray.
- Manufacturing Face Powder, by S. P. Jannaway.

LEONARD HILL LIMITED
17, Stratford Place, Oxford St., London, W. 1, Eng.

Publishers

Food Manufacture, Paint
Manufacture, Food In-
dustries Weekly, Food

of

Industries Manual, Rub-
ber Information, Chemi-
cal Industries.



B. T. Babbitt, Inc., New York, is releasing the spring, 1936, portion of its farm-paper advertising campaign, the largest in its history, on "Babbitt Brand of Lye." A \$3,500 cash and merchandise prize contest will be featured in regional and State farm papers.

The Mennen Company, Newark, N. J., has appointed Maxon, Inc., New York, to handle all of its foreign advertising account. Newspapers, magazines and business papers will be used.

Universal Janitor Supply Company, 113 East 24th Street, New York, operated by Emil Zagon, has made an assignment for the benefit of creditors. The assignee is Barnett Friedelbaum, 70 West 40th Street, New York.

Maryland Agencies, Inc., Baltimore, has taken out a Maryland charter to deal in soaps, perfumes and other articles. It is authorized to have a capital stock of 2,000 shares of a par value of \$25 a share, with Joseph C. Miller, L. Dudley Miller and Joseph J. Ruppert as the incorporators of record.

A new concern which will manufacture a dry cleaning soap has recently been organized in Columbus, Ohio, under the name of the Atlantic Oil & Chemical Works. Factory space has been leased in a large one-story building at 1301 S. Front St. Charles W. Deuser, president of Deuser, Inc., which operates the Caskey Cleaning Co., 47-61 W. Gates St., heads the new firm.

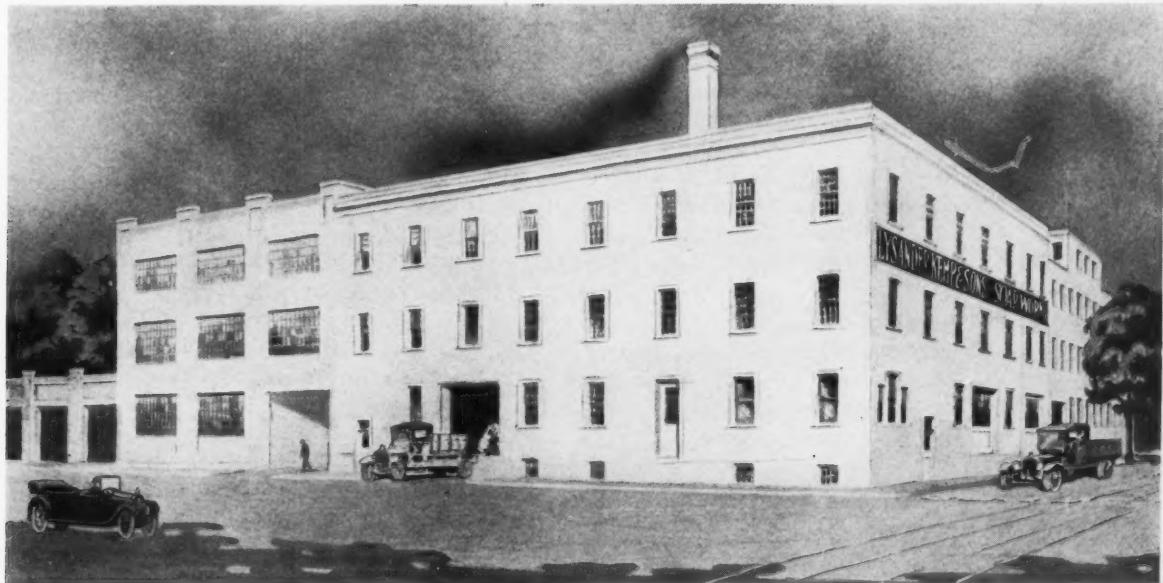
Commercial Laboratories, Inc., 1301 West 8th St., Kansas City, Mo., manufacturers of soap products, including liquid soap, are planning considerable expansion for 1936. Due to increase in sales the past year, the concern will build another story on their plant this coming year, thereby adding 20,000 square feet additional floor space. Dr. J. H. Weiner is president and manager of the company.

The 36th annual dinner of the Foragers of America was held in the east ballroom of the Hotel Astor, New York, the evening of January 4, with a large group of members and guests in attendance. The dinner, which was in honor of the ex-presidents of the organization, was followed by a floor show featured by a number of radio stars.

A. R. Vicary, of Mark W. Allen Co., has been elected president of the Michigan Allied Drug and Cosmetic Association for the coming year. Other officers include Joseph M. Wolff, Frederick Stearns & Co., vice-president, and Maison G. de Navarre, secretary-treasurer.

State Service Co., janitors' supplies, formerly at 313 W. Markham St., Little Rock, Ark., has moved to new quarters at 1305 McGowan St.

Castrol Chemical Co., Milwaukee, is introducing a new type mechanics' hand soap containing castor oil soap.



George E. Marsh Co., formerly of Lynn, Mass., have consolidated the manufacture of their Good-Will Soap and Kemp's soaps at the Kemp plant located at 200 Broadway, Cambridge, Mass. They will continue to make a full line of laundry and textile soaps. View of the Kemp plant taken several years ago.

RECORD OF TRADE-MARKS

The following trade-marks were published in the December issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

TRADE MARKS FILED

CLOV-O-LEEN—This on reverse plate describing antiseptic. Filed by Clov-O-Leen Co., Knoxville, Iowa, Sept. 24, 1935. Claims use since Jan. 2, 1935.

ROBERT—This in solid letters describing toilet soaps. Filed by Robert Enterprises, Inc., New York, Oct. 26, 1935. Claims use since 1923.

MERCO—This in solid letters describing disinfectant. Filed by Merchants Chemical Co., Inc., New York, Aug. 13, 1935. Claims use since 1930.

OPALO—This in outline letters on reverse plate describing cleaning compounds. Filed by Opalco Laboratory, McKeesport, Pa., Jan. 10, 1934. Claims use since Dec. 1, 1931.

TEXITOL—This in solid letters describing cleaner. Filed by Carbide and Carbon Chemicals Corp., New York, Aug. 23, 1935. Claims use since July 22, 1935.

HOUSE OF LORD'S—This in solid letters describing shaving cream. Filed by William A. Webster Co., Memphis, Tenn., Nov. 4, 1935. Claims use since Sept. 1, 1935.

SHIELD AND SCROLL bearing words "I undertake and I perform" describing insecticides. Filed by William Cooper & Nephews, Inc., Chicago, Sept. 30, 1935. Claims use since 1851.

SUPER-KLEAN—This in solid letters describing polish and cleaner. Filed by Hall Hardware Co., Minneapolis, Oct. 18, 1935. Claims use since Jan. 2, 1933.

CLOROBEN—This in solid letters describing deodorant. Filed by Herman Seydel, Jersey City, N. J., Oct. 9, 1935. Claims use since Aug. 21, 1934.

MURDER—This in solid letters describing insecticides and rodent exterminators. Filed by Valmor Products Co., Chicago, Sept. 11, 1935. Claims use since Nov. 6, 1929.

RED HEAD—This in outline letters, together with woman's head, describing drain pipe cleaners and water softener. Filed by Red Head Products, Inc., Cedar Rapids, Iowa, Sept. 21, 1935. Claims use since Aug. 4, 1934.

PUREX—This in solid letters describing general cleanser. Filed by Purex Corporation, Ltd., Los Angeles, May 7, 1935. Claims use since Oct. 10, 1923.

MIRACREME—This in solid letters describing shaving cream. Filed by Bloomingdale Bros., Inc., New York, Oct. 23, 1935. Claims use since Sept. 14, 1935.

OXYFUME—This in solid letters describing fumigating compositions. Filed by Carbide and Carbon Chemicals Corp., New York, Oct. 17, 1935. Claims use since Sept. 13, 1935.

COSRAY—This in script describing soap and shaving cream. Filed by Los Angeles Soap Co., Los Angeles, Oct. 18, 1935. Claims use since Sept. 27, 1935.

CODI'S RED STAR—This in solid letters with star describing washing and bleaching preparation. Filed by Codi Laboratories Co., Pittsburgh, July 25, 1935. Claims use since Jan. 1, 1931.

VESFUME—This in solid letters describing insecticide. Filed by Vestal Chemical Co., St. Louis, Sept. 23, 1935. Claims use since Aug. 1, 1934.

VESPRA—This in solid letters describing insecticide. Filed by Vestal Chemical Co., St. Louis, Sept. 23, 1935. Claims use since Aug. 1, 1934.

MYREMOFORM—This in solid letters describing mouth antiseptics. Filed by Thatcher Laboratories, Milwaukee, Sept. 28, 1935. Claims use since January, 1927.

PERM-A-GLO—This in solid letters describing floor wax. Filed by Fuld Brothers, Inc., Baltimore, Aug. 23, 1935. Claims use since June 1, 1935.

RITE-WAY—This in solid letters describing polish and wax. Filed by Cardinal Laboratories, Inc., Chicago, Oct. 7, 1935. Claims use since June, 1934.

MERCO—This in solid letters describing soap, soap powder, dry cleaning soap, etc. Filed by Merchants Chemical Co., New York, Aug. 13, 1935. Claims use since May, 1929, on soap powder and later dates on other products.

INSTO-KLEEN—This in solid letters describing cleaner. Filed by Seal-Tite Products Co., Los Angeles, Oct. 29, 1935. Claims use since Oct. 5, 1935.

CORTINA—This in outlined letters describing castile soap. Filed by Spanish Trading Corp., New York, Nov. 5, 1935. Claims use since Sept. 1, 1930.

MARQUITA—This in solid letters describing castile soap. Filed by Spanish Trading Corp., New York, Nov. 5, 1935. Claims use since Sept. 1, 1930.

SWAGGER—This in letters lined horizontally. Filed by Franklin Research Co., Philadelphia, Nov. 11, 1935. Claims use since June 24, 1935.

CHIP-EE—This on reverse plate describing shoe polish. Filed by Chic-ee Manufacturing Co., Allentown, Pa., Nov. 13, 1935. Claims use since Oct. 1, 1935.

GRO-FLEX—This in solid letters describing shampoo.

Filed by Gro-Flex Corp., New York, Sept. 18, 1935. Claims use since Aug. 1, 1935.

PRETOX—This in solid letters describing insecticide concentrates. Filed by R. J. Prentiss & Co., New York, Oct. 15, 1935. Claims use since June 1, 1935.

THE END OF THE ROAD—This in solid letters describing insecticides. Filed by Smith Chemical Co., Tampa, Fla., Oct. 28, 1935. Claims use since Jan. 5, 1935.

TRADE MARKS GRANTED

330,370. Silver Polish. Lane Laboratories, Inc., Camden, Maine. Filed May 7, 1935. Serial No. 364,632. Published September 17, 1935. Class 4.

330,427. Flushing Powder for Bathroom Fixtures. Derris, Inc., New York. Filed July 15, 1935. Serial No. 367,289. Published September 24, 1935. Class 4.

330,438. Cleaning Compounds. Nulene Co., New York. Filed July 10, 1935. Serial No. 367,134. Published September 24, 1935. Class 4.

330,508. Bleaching and Antiseptic Compounds. Sinclair Manufacturing Co., Toledo, Ohio. Filed April 24, 1935. Serial No. 364,151. Published September 17, 1935. Class 6.

330,523. Hat Cleaner. Robert Britigan Corp., Chicago. Filed June 10, 1935. Serial No. 365,981. Published September 17, 1935. Class 4.

330,528. Insecticide and Fungicide. Acme White Lead & Color Works, Detroit, Mich. Filed June 3, 1935. Serial No. 365,716. Published September 17, 1935. Class 6.

330,530. Disinfectant, Sterilizer and General Cleaner. American Bluing Co., Buffalo. Filed June 6, 1935. Serial No. 365,834. Published September 17, 1935. Class 6.

330,531. Soap and Particularly an Abrasive Soap. Skat Co., Hartford, Conn. Filed June 7, 1935. Serial No. 365,902. Published September 24, 1935. Class 4.

330,533. Soap. Sunwash Process Co., Detroit. Filed May 20, 1935. Serial No. 365,161. Published September 17, 1935. Class 4.

330,539. Bed Bug Exterminator. Carl Michael, Pittsburgh. Filed May 28, 1935. Serial No. 365,522. Published September 17, 1935. Class 6.

330,547. Porcelain Cleaning Compound. Wambaugh Chemical Co., Goshen, Ind. Filed June 28, 1935. Serial No. 366,788. Published September 17, 1935. Class 4.

330,553. Polishes for Shoes. Chic-Ee Manufacturing Co., Allentown, Pa. Filed July 3, 1935. Serial No. 366,934. Published September 17, 1935. Class 4.

330,555. Washing Fluid, Germicide and Bleach. Novel Wash Co., Inc., St. Louis. Filed July 2, 1935. Serial No. 366,913. Published September 17, 1935. Class 4.

330,563. Liquid Cleanser for Shoes. Robert Lawrence Corp., New York. Filed July 26, 1935. Serial No. 367,722. Published September 24, 1935. Class 4.

330,611. Shampoo Soap in Paste and Liquid Form.

Shamp-Pine, Inc., Indianapolis. Filed June 20, 1935. Serial No. 366,442. Published September 24, 1935. Class 6.

330,612. Complexion Soap. Castilian Products Corp., Los Angeles. Filed June 20, 1935. Serial No. 366,402. Published October 1, 1935. Class 4.

330,613. Hair Shampoo. Dandoban Laboratories, Detroit. Filed June 14, 1935. Serial No. 366,190. Published September 24, 1935. Class 6.

330,642. Washing Compound. Gem Products Sales Co., Camden, N. J. Filed July 9, 1935. Serial No. 367,097. Published October 1, 1935. Class 4.

330,672. Soap and Shaving Cream. Sydney Ross Co., Newark, N. J. Filed July 24, 1935. Serial No. 367,625. Published October 1, 1935. Class 4.

330,754. Insecticides. Hammond Paint & Chemical Co., Beacon, N. Y. Filed July 23, 1935. Serial No. 367,565. Published October 8, 1935. Class 6.

330,762. Deodorants, Disinfectants. Shamel Corp., New York. Filed July 23, 1935. Serial No. 367,586. Published October 1, 1935. Class 6.

330,779. Cleaning Preparation for Carpets, Rugs, and Upholstery. Artjay Products Co., Scranton, Pa. Filed August 16, 1935. Serial No. 368,375. Published October 8, 1935. Class 4.

330,818. Insecticide. Johnson Oil Refining Company, Chicago. Filed April 22, 1935. Serial No. 364,044. Published October 1, 1935. Class 6.

330,820. Shaving Cream. K. T. S. Products Co., New York. Filed April 20, 1935. Serial No. 364,025. Published October 8, 1935. Class 4.

330,826. Deodorizers, Disinfectants, Insecticides. Shampoos. Creco Co., Long Island City, N. Y. Filed November 23, 1932. Serial No. 332,403. Published October 8, 1935. Class 6.

330,843. Soaps and Shaving Creams. K. T. S. Products Co., New York. Filed March 20, 1935. Serial No. 362,790. Published October 8, 1935. Class 4.

330,858. Dog Soap. Woodbury Hospital and Boarding Kennels, Portsmouth, N. H. Filed November 2, 1934. Serial No. 357,832. Published October 8, 1935. Class 4.

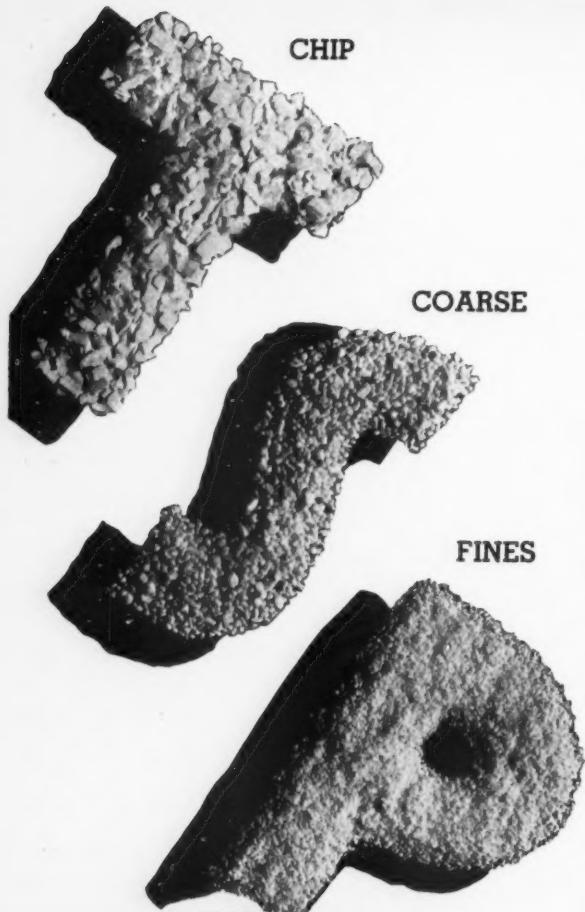
330,914. Insecticides. Noxlarva Co., Santa Monica, Calif. Filed July 29, 1935. Serial No. 367,781. Published October 8, 1935. Class 6.

331,060. Insecticides. Hammond Paint & Chemical Co., Beacon, N. Y. Filed July 22, 1935. Serial No. 367,534. Published October 1, 1935. Class 6.

331,064. Antiseptic and Germicide. American Drug & Chemical Co., Minneapolis. Filed July 15, 1935. Serial No. 367,277. Published October 1, 1935. Class 6.

331,112. Shaving Cream. Ford Hopkins Co., Chicago. Filed August 17, 1935. Serial No. 368,403. Published October 22, 1935. Class 4.

331,116. Soap. Lanman & Kemp-Barclay & Co., New York. Filed August 15, 1935. Serial No. 368,335. Published October 22, 1935. Class 4.



VICTOR

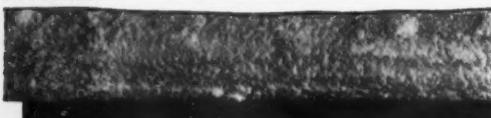
CHEMICAL WORKS

141 West Jackson Blvd.

CHICAGO

A brilliant white, free-flowing and non-caking tri-sodium phosphate of uniformly high quality. Four grades as illustrated.

POWDERED



CHIP

COARSE

FINES

turner



CAUSTIC POTASH

FLAKE	SOLID	LIQUID
88/92%	88/92%	45%

CAUSTIC SODA

FLAKE	SOLID	LIQUID
-------	-------	--------

For Manufacturers of
SOAPS, OIL SOAPS,
DRY CLEANING SOAPS,
LIQUID SOAPS AND
TEXTILE SPECIALTIES

Turner Caustic Potash and Caustic Soda may be given any test you choose. Produced under a rigid system of control, they are doubly checked in the process of manufacture.

Turner chemicals are uniform and of the highest standard . . . backed by years of thorough and dependable service . . . yet priced to meet competition.

Write for details and prices

JOSEPH TURNER & Co.
500 Fifth Avenue • New York

83 EXCHANGE PL., PROVIDENCE, R. I.

*Suppliers of Chemicals
for over 70 years*

New Equipment and Bulletins

IF YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York, mentioning the number of the item.

189. Dobbins Mfg. Co., N. St. Paul, Minn., is introducing a new soap sprayer for use with scrubbing soap. The manufacturers say the new sprayer applies the soap



in a thin film, forcing it into cracks and crevices that cannot ordinarily be reached with mop or brush. The soap or cleaner dissolves the dirt which can then be picked up with a moist mop. A circular describing the new sprayer is available.

185. T. F. Washburn Co., Chicago, has just published a new 52-page loose-leaf book on the subject "Modern Floor Maintenance". An introductory chapter takes up cleaning and finishing equipment and materials, and subsequent chapters deal specifically with proper maintenance of such floor surfaces as wood, asphalt, linoleum, rubber, terrazo, tile, marble, magnesite and concrete. A special section is given over to instructions on removal of stains. Copies of the book are available to readers of SOAP on application.

186. Lukens Steel Co., Coatesville, Pa., has issued a new 24-page booklet on "Lukens" nickel-clad steel, illustrating and describing its many uses in the chemical processing industries.

187. Metropolitan Life Insurance Co., New York, has issued a new survey entitled "Training Supervisors and Key Men". Copies are available on application to SOAP.

188. Glyco Products Co., Brooklyn, has issued a new catalog, "Chemicals by Glyco". In addition to chemical and physical tables the catalog contains pH tables of the most common acids and bases. A new folder issued by the same concern tells how cosmetic creams can be manufactured free from alkalis. Copies available on request.

190. S. B. Penick & Co., New York, have available for distribution to concerns in the insecticide field a few copies of a recent reprint of an article by F. Tatters-

field and J. T. Martin, entitled "The Problem of the Evaluation of Rotenone-Containing Plants". This work appeared originally in the *Annals of Applied Biology*.

191. Consolidated Products Co., New York, has mailed a new edition of *Consolidated News*, company house organ.

192. Foxboro Co., Foxboro, Mass., is introducing a new accessory for air-operated control valves. The "Vernier Valvactor" was developed by Foxboro to eliminate valve-sticking and to assure hair-line valve positioning.

193. R. A. Jones & Co., Cincinnati, has issued a new booklet illustrating a number of the products handled on Jones cartoning machines and reprinting a number of letters received from various users of Jones machinery commenting on its performance. Copies are available through SOAP.

194. R. J. Prentiss & Co., New York, has recently mailed a new issue of *Derris Developments* discussing the rotenone content of dusts. It is urged that users place more emphasis on total toxicity and less on rotenone analysis alone. Copies are available.

195. Motor Improvements, Inc., Newark, N. J., has recently made a new installation of a steam-jacketed "Purolator" filter for use in the manufacture of bluing wax. The filter replaces a former system of screening the wax. A release describing the new installation is available on request.

New Patents

Conducted by

Lancaster, Allwine & Rommel

Registered Attorneys

PATENT AND TRADE-MARK CAUSES
815 15th St., N. W., Washington, D. C.

Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,019,775. Process for Producing Soap. Patented November 5, 1935 by Benjamin Clayton, Sugarland, Texas, and Ralph Everett Burns, Los Angeles, Calif., assignors by direct and mesne assignments, to Refining, Inc., Reno, Nev. A process of continuously producing soap, which comprises: mixing saponifiable and saponifying material in the proper proportions to produce soap by a reaction thereof; exerting sufficient pressure on the mixture to cause it to flow through a restricted heating zone; heating the mixture during its flow through the zone sufficient to considerably accelerate the reaction; allowing the soap to escape through a discharge orifice

(Turn to Page 75)



BENZOPHENONE

Inexpensive aromatic of
the rose type. It is stable
and a good fixative.

Special prices on contract

SCHIMMEL & CO., Inc.

601 WEST 26th STREET

NEW YORK, N. Y.

"Suppliers of Raw Materials to Soap and Allied Industries for 97 Years"

IMPORTERS

DEALERS

BROKERS

OLIVE OIL (all grades) and OLIVE OIL FOOTS

Cottonseed Soap Stock

Neatsfoot Oil
Coconut Oil
Cottonseed Oil
Palm Kernel Oil
Stearic Acid
Oleo Stearine
Soya Bean Oil
Palm Kernel Oil
(English or German
Denatured)

Fatty Acids, Animal & Vegetable

Rapeseed Oil
Teaseed Oil
Castor Oil
Sesame Oil
Lard Oil
Palm Oil
Corn Oil
Peanut Oil
Grease (Animal)

Boiled-down Cottonseed Soap

Trisodium Phosphate
Caustic Potash
Carbonate Potash
Bath Powder
Modified Soda
Caustic Soda
Silicate of Soda
Meta Silicate and Metso

"CEREPS" Superfattening Neutralizing Agent

Write for Information and Samples.

WELCH, HOLME and CLARK CO., INC.

563 Greenwich Street

Est. 1838

New York City

CONTRACTS AWARDED

On a bid recently opened by U. S. Marine Corps, Washington, D. C., for 7,000 cans cleanser, Dixie Janitor Supply Co., Washington, was low bidder. The quotation was 2.49c.

On a bid recently opened by Brooklyn Medical Dept. for 8,000 lbs. powdered laundry soap, Holbrook Mfg. Co. was given the contract with low bid of 7.5c.

On recent bids opened by F. Sam Houston, Texas, Q. M., awards have been made as follows: 800 lbs. dry soap to Slater-Robbins Co., New York, 5c; 225 lbs. soap powder to H. Kohnstamm & Co., Chicago, 9.75c; 3,420 lbs. soap chips to Fry Brothers, Cincinnati, 8.5c; 4,500 lbs. soap chips to Colgate-Palmolive-Peet Co., Jersey City, N. J., 9c; 2,160 lbs. soap chips to Swift & Co., Chicago, 8.26c; 24,150 lbs. soap chips to Iowa Soap Co., Burlington, Iowa, 7.9c; 1,650 lbs. soap chips to Iowa Soap Co., Burlington, Iowa, 8.94c; and 25,050 lbs. soap chips to Iowa Soap Co., Burlington, Iowa, 7.7c.

In a recent bidding opened by Chicago, Q. M., awards have been made as follows: 300,000 lbs. laundry soap to Samuel M. Sher, Chicago Heights, Ill., 3.4c; 300,000 lbs. laundry soap to Armour & Co., Chicago, 3.37c; and 2,000 cakes toilet soap to Armour & Co., Chicago, 2.48c.

In recent bids opened by Ft. Mason, Calif., Q. M., a contract was awarded General Soap Co., San Francisco, for a quantity of grit soap, their quotation being 3.31c. Newell-Gutradt Co. received the award for a quantity of laundry soap, their quotation being 3.95c.

Bids recently opened by Chicago, Ill., Q. M., have been awarded to Naphthalene Products Co., Birmingham, Ala., for 13,800 lbs. naphthalene flake. Their bid was 4.375c. On 45,120 lbs. caustic soda, Pennsylvania Salt Mfg. Co., received the award, their quotation being 4.02083c.

Awards on recent bids opened by Chicago, Ill., Q. M., have been made as follows: 12,000 lbs. chip soap to Denver Fire Clay Co., Denver, 8.375c; 9,000 lbs. chip soap to Iowa Soap Co., Burlington, Iowa, 7.52c; 6,000 lbs. chip soap to Colgate-Palmolive-Peet Co., Jersey City, N. J., 8.1c; 1,500 lbs. chip soap to Colgate-Palmolive-Peet Co., Jersey City, N. J., 8.07c; 6,000 lbs. laundry soap to Iowa Soap Co., Burlington, Iowa, 8.21c; 9,520 lbs. laundry soda to Cudahy Packing Co., Chicago, 2.35c; 9,800 lbs. laundry soda to H. H. Rosenthal Co., New

York, 2.5c; and 12,880 lbs. washing soda to Interboro Chemical Co., New York, 2.625c.

In a recent bidding opened by Jeffersonville, Ind., Q. M., Fry Brothers, Cincinnati, received the award for 2,000 lbs. powdered laundry soap. Their quotation was \$8.20 cwt. On 2,800 lbs. laundry soda, Detroit Soda Products Co., Washington, received the award, their quotation being \$1.64½ cwt. Sterling Supply Corp., Philadelphia, was awarded the contract for 500 lbs. laundry sour. Their bid was \$6.21 cwt. Detroit Soda Products Co., Washington received the award for 15,000 lbs. laundry soda, their quotation being \$1.88½ cwt.

ORIGINAL BRADFORD PAYS BONUS

A Christmas bonus equivalent to two-weeks salary was presented by the Original Bradford Soap Works, Inc., of West Warwick, R. I. to all of its employes this year. The presentation was made to the assembled employes on the day before Christmas by Daniel McIver, treasurer of the firm, who thanked the workers for their loyalty and efficiency during 1935 in distributing their share of the profits. The company during the past few years has been manufacturing in the B. B. and R. Knight Valley Queen Mill Buildings at Riverpoint, West Warwick.

A school supply concern located in Indiana, wants to get in touch with a manufacturer of an automatic device for feeding dishwashing compounds into dish-washing machinery. The Publishers of SOAP will appreciate receiving information along this line at 254 West 31st Street, New York.

J. W. McCutcheon of Lever Brothers, Ltd., Toronto, Canada, was a speaker at a recent meeting of the Toronto Chemical Association at which pH determination and control was discussed by several members. Mr. McCutcheon described the control of pH as a means of insuring the correct conditions for the removal of organic material from spent lye in the production of crude glycerine. The lye is acidified to pH between 3.4 and 6.2, depending on the nature of impurities to be removed, and aluminium and iron salts added. The metallic soaps are most completely precipitated at pH 6.2, but are then very difficult to filter. A compromise must therefore be made between precipitation and filtration characteristics. The complete removal of the aluminium and iron is accomplished by addition of alkali to pH about 7.4.

Market Report on
TALLOW, GREASES, AND OILS

(As of January 9, 1936)

NEW YORK—The principal development in the oil and fat market this period was the announcement of the Supreme Court decision on the AAA. As yet the decision seems to have but little effect on spot prices, and some business has been done since the announcement at prices but little changed from those of last week. Large buyers of soap oils, with a few exceptions, however, have practically withdrawn from the market and are apparently taking time to digest the whole situation thoroughly before making any decision as to future buying policies. Brokers for the moment seem to feel that no immediate change is called for in the current level of market prices, although buyers may have somewhat different ideas when they finally reappear in the market in volume.

COCONUT OIL

Coconut oil and copra were firm and but little changed in price at the close of the period, with New York tanks of Manila oil quoted at 4½ to 4½c per lb. Copra offerings are reported as light, with sellers optimistic as to the possibility of higher prices as demand increases later in the year.

CORN OIL

Little change was noted in the price of corn oil as compared with its price of a month ago. A mild reactive tendency was noted after the AAA decision, but it failed to attain any substantial proportions.

GREASE

The various grades of grease were unchanged in price as compared with their levels of a month ago. House and yellow varieties are quoted currently at 5½ to 6c per lb.

LARD

Lard may be one of the first fats to reflect the recent decision as since its announcement farmers have been rushing their hogs to market resulting in at least a temporary drop in the price of live hogs. Heavy hog marketing now would of course depress the price of lard and might lead to secondary reactions in other competing fats.

TALLOW

Tallow is still quoted at 7c per lb., the same price at which it was quoted before the recent Supreme Court announcement. There have been a few lots sold at this price since the decision, and it is reported that one of the large soapers is still taking regular weekly shipments at the current level of prices. Just what permanent effect the decision will have on tallow prices is not yet apparent.

The index of employment in the soap industry stood at 103.7 in November, 1935, as compared with 105.4 in October and 104.6 in November, 1934. The index is based on 100 as the average for the three years, 1923-1925. The pay-roll index registered 98.3 in November, 1935, as compared with 101.3 in October, and 92.5 in November, 1934.

Paul's Beauty Creations, shampoos and cosmetics, formerly at 33 East Ave., Rochester, N. Y., has moved recently to Hollywood, Cal., and may be addressed care of Box 334.

WALLACE BUSH JOINS FISCHBECK

Wallace A. Bush has become associated with Charles Fischbeck Co., New York, new essential oil and perfuming materials house recently established by Charles Fischbeck. Mr. Bush was formerly with Schimmel & Co., New York. Charles Fischbeck Co. opened its new offices and laboratories at 119 West 19th St., New York, on January 2. Approximately 10,000 square feet of space has been taken on the seventh floor at that address to house offices, laboratories, and shipping departments. The laboratories are in charge of Duncan M. Brown. The company is handling both foreign and domestic essential oils, aromatics, floral essences, and perfume bases. Charles Fischbeck, head of the firm, was formerly vice-president of Ungerer & Co., New York, having been associated with that company for the past twenty-five years.

RAW MATERIALS, TAXES, ET AL

(From Page 24)

the same rates and other important changes were lacking. Trisodium phosphate has been too cheap, and it is logical to expect higher prices. In the essential oil group, we find lavender oil substantially higher due to a continued shortage of high quality oil. Bergamot oil also gained in price over the course of the year due to the Italo-Ethiopian conflict. Unless there is definite monetary inflation this year, any wide general swing in chemicals and perfuming materials is unlikely.

The net result of all the changes in soap raw material prices over 1935 was to bring the general average up to a point slightly above the average mark for the past ten years. Many items in the list are still priced, of course, somewhat under the levels which used to be regarded as normal ten years ago, but the advance from the low points of 1932 and 1933 has been surprisingly rapid.

Market Report on
SOAP AND DISINFECTANT CHEMICALS

(As of January 9, 1936)

NEW YORK—Business in the market for soap and disinfectant chemicals was rather quiet during the period just closed, with buyers holding down purchases to keep their inventories at a low level over the year-end period. Sellers were engaged principally in winding up contracting for 1936 requirements. There were few price changes in the chemical group for 1936, the only changes to be announced this period coming in cresylic acid and potash alum. The cresylic price has been advanced rather sharply, following a similar advance in the quotation on imported acid.

ALKALIS

Withdrawals by consumers were kept at a minimum over the period just closed, with buyers seeking to keep stocks down and interested in having their shipments apply against 1936 contracts. Contracting on alkalis was wound up by producers this period at the same level of prices which has been in effect through 1935. As was announced last period bleaching powder will be priced 10c per 100 lbs. higher this year, and tank cars of chlorine will be 15c per 100 lbs. higher. Another changed schedule appeared this period for alum. Potash lump alum is now quoted at $3\frac{1}{4}$ to $3\frac{1}{2}$ c per lb., at works, with the New York delivered price 3 4/10c per lb.

COAL TAR PRODUCTS

Domestic producers advanced the price of cresylic acid late last month, the range now being 51 to 53c per gal., as compared with a previous low price of 45c. This followed a similar advance in the price of imported acid.

GLYCERINE

Glycerine prices remain firm and it is reported that a substantial amount of business has been written at present levels to cover requirements over the next few months. Offerings of crude continue light, with the market in a strong position.

NAVAL STORES

The rosin market was quiet this period, with prices fluctuating only slightly. Receipts on the southern seaboard have been light in recent weeks due to cold weather. Buying has been practically at a standstill as users strove to keep stocks low over the inventory period.

Owens-Illinois Glass Co. have moved their New York offices to the 48th floor of the Chrysler Building. Featured in the new layout are partitions made from glass blocks and two display rooms, one for standard empty glass containers and the other for filled packages. Smith Rairdon is eastern manager with headquarters in New York.

Application of Armand Co., Des Moines, Iowa, for a writ of certiorari to obtain a review of the recent adverse decision of the U. S. Circuit Court of Appeals in a resale price maintenance action brought by the Federal Trade Commission against Armand, has been denied by the Supreme Court of the United States. Refusal of the higher court to review the lower court decision means that Armand's appeal from the F.T.C. cease and desist order can go no further.

Wm. F. Myles, Inc., Boston, is introducing a new product "ToN", a sodium metaphosphate soap film solvent which is being sold in bulk through beauty shops and hair dressers. Distribution is being handled by Edward E. Tower Co., Boston. The new product is odorless and colorless and is said to be the only product on the market capable of removing soap curd harmlessly.

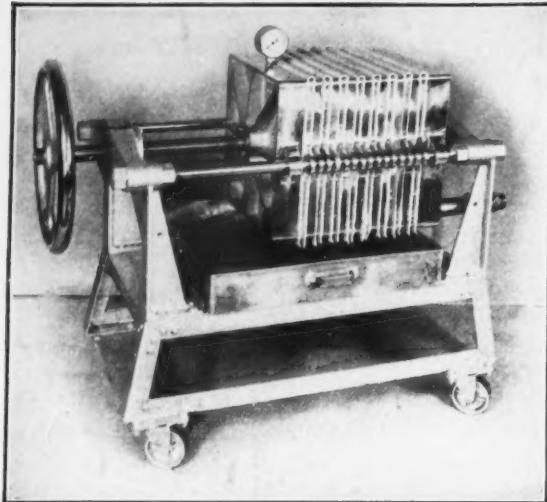
HONOR GLYCERIN DISCOVERER

The discoverer of glycerin, Dr. Karl Wilhelm Scheele, was honored last month by the American-Scandinavian Foundation on the 193rd anniversary of his birth. Dr. Scheele first extracted glycerin in 1779. He first obtained this substance by mixing olive oil with litharge, heating, washing with water, and evaporating. A sweet-tasting viscous heavy liquid was the result. Five years later Dr. Scheele extracted the same substance from almond oil, lard and butter, thus demonstrating its presence in both animal and vegetable fats and oils. For a long time glycerin was known as "Scheele's sweet principle" or "oil sugar" or by the name he gave it himself, the "sweet principle of fats."

Iowa Soap Co., Burlington, Ia., in the December issue of its *Hawkeye Bulletin* discusses the subject "How Soap Cleans.—Why Use Soap?" The Bulletin also states that under certain conditions, the detergent properties of soaps can be improved by alkaline builders. The "How and Why of Soap Builders" will be discussed in a future issue of the Bulletin.

H. A. Weidman joined the sales staff of P. R. Dreyer, Inc., New York, January 1st. Mr. Weidman was formerly with Schering Corp., New York, as manager, and more recently has been with Magnus, Mabee & Reynard, Inc., New York.

George C. O'Brien, Hercules Powder Co., has been transferred to the New York office as assistant manager. Mr. O'Brien was formerly assistant director of sales at the Hercules Wilmington office.

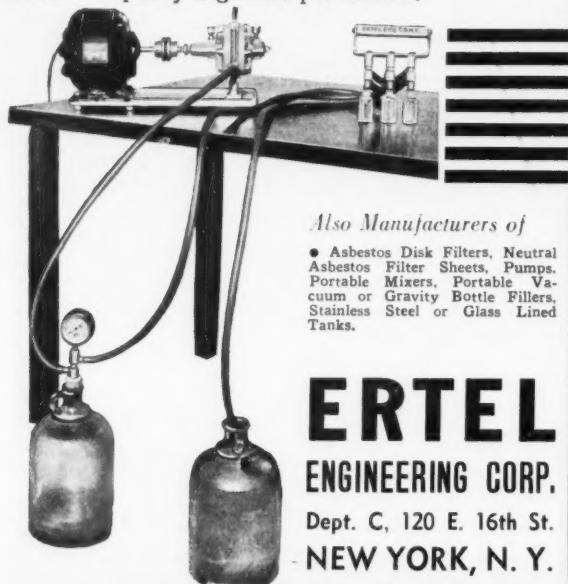


ERTEL CLOTH FILTER

• An inexpensive filter to produce clear, sparkling liquid soaps. Cuts production costs by its speed, capacity and positive filtration.—Both your sales department and your production department will profit by the use of this filter.

ERTEL PORTABLE VACUUM BOTTLE FILLER

• Speed . . . accuracy . . . convenience . . . dependability . . . economy. All five advantages are combined in this serviceable little bottle filler. Can be moved anywhere about the plant . . . wherever there is an electric outlet . . . for any type of bottle. Capacity 2 gallons per minute.



Also Manufacturers of

- Asbestos Disk Filters, Neutral Asbestos Filter Sheets, Pumps. Portable Mixers, Portable Vacuum or Gravity Bottle Fillers, Stainless Steel or Glass Lined Tanks.

ERTEL
ENGINEERING CORP.
Dept. C, 120 E. 16th St.
NEW YORK, N. Y.

**ISCO
PRODUCTS**

A Standard of Quality for 120 Years

CARBONATE OF POTASH

Imported—also Domestic
Calcined 96-98%, 98-100%
Hydrated 83-85%
Liquid 47-48%

CAUSTIC SODA

Prime 76%. Our own manufacturer. Flake—Crystal—Solid
Various packages

STEARIC ACID

Triple pressed — Low Iodine number

SILVER TALC

Noted for whiteness and consistent purity

BORAX

Powdered, Crystals, Granulated

CAUSTIC POTASH

Imported and Domestic
Flake—Solid—Granular
Broken—Walnut—Liquid

Various packages

LARVACIDE (Chloropicrin)

The Safer, self-warning Fumigant. *For insect and rodent control.*

Industrial Chemicals Since 1816

INNIS, SPEIDEN & CO.
117 LIBERTY STREET • NEW YORK

BOSTON PHILADELPHIA
CLEVELAND KANSAS CITY
CHICAGO GLOVERSVILLE, N.Y.
Factories at Jersey City, N. J. and Niagara Falls, N. Y.

Market Report on
ESSENTIAL OILS AND AROMATICS

(As of January 9, 1936)

NEW YORK—There were a whole series of price changes in the market for essential oils this period, about evenly divided between advances and declines. On the up-side of the market two of the outstanding features were anise oil and patchouli oil both of which registered substantial price advances. On the down side one of the most prominent features was citronella oil, with lower quotations reported on both Java and Ceylon oil. Prices are currently so low, it is stated, that this factor may lead to a curtailment of production. Other oils which declined in price included bergamot, cassia and cedarwood.

ANISE OIL

All offers of anise oil were withdrawn by primary market suppliers this period, leading to a series of advances in the spot market which at the close totaled 13 to 15c per pound. The current asking price is 55 to 60c per pound. In view of the uncertainty about replacements, local sellers are very sparing in their offers.

BERGAMOT OIL

Quotations on bergamot oil eased off moderately this period although there has been no change in the Italian situation.

CASSIA OIL

With replacement oil available at a slight concession, local dealers made a 5c reduction in the price of cassia oil, bringing the inside price down to \$1.10 per lb.

CITRONELLA OIL

Both Java and Ceylon oil were again reduced in price this period, bringing the former to 26c and the latter to 23c. Indications from the primary markets are that at these levels producers will be inclined to reduce production and to turn to more remunerative crops.

PATCHOULI OIL

The sharpest advance of the period came in patchouli oil. Cables quoting prices on replacements have been coming in higher and higher and it seems probable that the recently reported floods have done severe damage to the crop. In addition, demand has been much heavier of late, whether on account of the shortage report or because of increased consumption is not yet apparent. The result has been to push prices up to the present range of \$5.25 to \$6.00 per pound, an advance of \$3.00 in the course of just about two months.

F. A. Haptonstall, Jr., vice-president and treasurer of Best Chemicals, Inc., Pittsburgh, has severed his connection with this company and became associated with the office of J. C. Ackerman, Pittsburgh.

A two-day sales meeting was held at the offices of Magnus, Mabee & Reynard, Inc., New York, January 3 and 4, with salesmen from all U. S. offices and representatives from Cuba, Canada and Mexico in attendance. The meeting terminated with a dinner for all M M & R employees the evening of January 4. At the dinner two new members were added to the company's 20-year club—Percy C. Magnus, president of the company, and J. B. Magnus, vice-president.

UNGERER ADVANCES EXECUTIVES

Kenneth G. Voorhees, vice-president of Ungerer & Co., New York, has been made general manager of the company, and Ivan H. Budd has been appointed sales manager, both changes going into effect January 1. Frederick H. Ungerer continues as president and treasurer of the company, with Milton S. Butler as secretary. Mr. Voorhees has been with Ungerer & Co. for several years in a sales capacity. Mr. Budd has been with Ungerer for the past year and prior to that time was president of the now dissolved Budd Aromatic Chemical Co. Previous connections had been with Julian W. Lyon Co. and Wangler-Budd Co.



Kenneth G. Voorhees

Chuit Naef & Co., Geneva, Switzerland, represented in United States by Ungerer & Co., New York, has distributed a very handsome 1936 calendar. The illustrations include striking scenes in the Swiss Alps.

Clifford L. Weston, formerly of Antoine Chiris Co., and Givaudan Delawanna, Inc., is now connected with Aromatic Products, Inc., New York, as salesman.

H. G. Weicker, vice-president of Dodge & Olcott Co., New York, perfuming materials, has just returned to New York after a visit to various company branch offices. Mr. Weicker reports a very favorable business increase in 1935 over 1934 sales, and predicts a continuation of the up-trend in 1936.

J. G. Snyder of Flavors & Aromatics Supply Co., 68 King St., E., Toronto, Ontario, Canada, has been appointed Canadian representative for P. R. Dreyer, Inc., New York City.

P
R
O
D
U
C
T
S

SOLVAY

• TRADE MARK REG. U. S. PAT. OFF.



SODA ASH CAUSTIC SODA CAUSTIC POTASH

Liquid — Solid — Flake

•

LIQUID CHLORINE

Contract or Spot Delivery

In tank cars and multiple unit cars

•

Write for Prices

SODA ASH . CAUSTIC SODA . AMMONIUM CHLORIDE
CHLORINE . MODIFIED SODAS . CALCIUM CHLORIDE
Salt . Caustic Potash . Ammonium Bicarbonate
Causticized Ash . Para-Dichlorobenzene
Sodium Nitrite . Potassium Carbonate

•

SOLVAY SALES CORPORATION

*Alkalies and Chemical Products Manufactured by
The Solvay Process Company*

40 RECTOR STREET NEW YORK

Boston, Syracuse, Chicago, Indianapolis, Cleveland,
Cincinnati, Pittsburgh, Detroit, Philadelphia,
Kansas City, Houston, St. Louis, Charlotte, New York

KRANICH SOAP

LIQUID SHAMPOO BASE

Coco Oil 60%
Olive Oil 60%
Natural, Opal, Green

LIQUID SOAPS

Coconut..10%-15%
20%-40% Concentrate
Colored and Perfumed

SCRUBBING SOAPS

Pine-Sassafras
Plain

LIQUID SHAMPOOS

Coconut Oil-30%-45%
Olive Oil-30%
Castile-30%

POWDERED SOAPS

Castile U.S.P.
Coco Castile 50-50
Pure Coconut
Pure Palm

POTASH SOAPS

Soft and Hard
U.S.P. 9th and 10th

HARD AUTO SOAPS

Kranich Standard Soaps are manufactured and produced entirely in our own factory. All our oils and fats are processed and purified before use. All alkalies are dissolved and settled to remove impurities. All our processes are technically supervised and a chemical analysis made on all finished products to assure satisfaction to our trade.



**KRANICH
SOAP CO., Inc.**

54-60 RICHARDS ST., BROOKLYN, N.Y.

CURRENT PRICE QUOTATIONS

(As of January 9, 1936)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums	lb.	\$.11	\$.12½
Acid, Boric, bbls., 99½%.....	ton	95.00	100.00
Cresylic, drums	gal.	.51	.53
Low boiling grade.....	gal.	.64	.65
Oxalic, bbls.	lb.	.11½	.12½
Adeps Lanæ, hydrous, bbls.	lb.	.16	.18
Anhydrous, bbls.	lb.	.17	.19
Alcohol, Ethyl, U. S. P., bbls....	gal.	4.16	4.28
Complete Denat., No. 5, drums, ex. gal.	gal.	.35½	.43½
Alum. Potash lump	lb.	.03¼	.03½
Ammonia Water, 26°, drums, wks...lb.	lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls...lb.	lb.	.08	.12½
Bleaching Powder, drums.....100 lb.		2.25	2.60
Borax, pd., cryst., bbls., kegs.....ton	ton	50.00	55.00
Carbon Tetrachloride, car lots.....lb.	lb.	—	.05¼
L. C. L.	lb.	.07	.08½
Caustic, see Soda Caustic, Potash Caustic			
China Clay, filler.....ton	ton	10.00	25.00
Cresol, U. S. P., drums.....lb.	lb.	.11	.11½
Creosote Oil	gal.	.11½	.12½
Feldspar	ton	14.00	15.00
(200 to 325 mesh)			
Formaldehyde, bbls.	lb.	.06	.07
Fullers Earth	ton	15.00	24.00
Glycerine, C. P., drums.....lb.	lb.	.14	.14½
Dynamite, drums	lb.	.13¾	.14½
Saponification, drums	lb.	.10¼	.11½
Soap lye, drums	lb.	.09¼	.09½
Hexalin, drums	lb.	—	.30
Kieselguhr, bags	ton	—	35.00
Lanolin, see Adeps Lanæ.			
Lime, live, bbls.	per bbl.	1.70	2.20
Mercury Bichloride, kegs.....lb.	lb.	.71	.76
Naphthalene, ref. flakes, bbls.	lb.	.06¾	.07
Nitrobenzene (Myrbane) drums.....lb.	lb.	.09	.11
Paradichlorbenzene, bbls., kegs.....lb.	lb.	.16	.25
Petrolatum, bbls. (as to color).....lb.	lb.	.02	.07¼
Phenol, (Carbolic Acid), drums.....lb.	lb.	.14¼	.16
Pine Oil, bbls.....gal.	gal.	.59	.64
Potash, Caustic, drums.....lb.	lb.	.06¼	.06½
Flake	lb.	.07	.07¼
Potassium Carbonate, solid.....lb.	lb.	.07¼	.09½
Liquid	lb.	.03½	.03¾
Pumice Stone, powder.....100 lb.		3.00	4.00
Rosins (600 lb. bbls. gross for net) —			
Grade B to H, basis 280 lbs.	bbl.	5.25	5.65
Grade K to N	bbl.	5.92	6.10
Grade WG and X	bbl.	6.40	6.90
Wood	bbl.	4.40	5.75
Rotten Stone, pwd. bbls.	lb.	.02½	.04½
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04¼	.04%
Olive Castile, bars	lb.	.13	.19
powder.	lb.	.23	.30
Olive Oil Foot	lb.	.07	.07½
Powdered White, U. S. P.	lb.	.19	.21
Green, U. S. P.	lb.	.06½	.08
Tallow Chips	lb.	.07¼	.07¾
Whale Oil, bbls.	lb.	.05	.06
Soda Ash, cont., wks., bags, bbls. 100 lb.		1.23	1.50

	Car lots, in bulk	100 lb.	—	\$1.05
Soda Caustic, cont., wks., std.	100 lb.	—	—	2.60
Flake	100 lb.	—	—	3.00
Liquid, tanks	100 lb.	—	—	2.25
Soda Sal., bbls.	100 lb.	1.10	1.30	
Sodium Chloride (Salt)	ton	11.40	14.00	
Sodium Fluoride, bbls.	lb.	.07¼	.08¾	
Sodium Hydrosulphite, bbls.	lb.	.19	.20	
Sodium Silicate, 40 deg., drum. 100 lb.	lb.	.80	1.20	
Drums, 52 deg. wks.	100 lb.	1.35	1.75	
Tar Acid Oils, 15-25%	gal.	.21	.24	
Trisodium Phosphate, bags, bbls.	lb.	.03	.03½	
Zinc Oxide, lead free.....	lb.	.06	.06¼	
Zinc Stearate, bbls.	lb.	.20	.22	

Oils — Fats — Greases

Castor, No. 1, bbls.....	lb.	.10¼	.11
No. 3, bbls.	lb.	.09¾	.10½
Coconut			
Manila, tanks, N. Y.	lb.	.04½	.04%
Tanks, Pacific coast	lb.	.04¾	.04½
Cod, Newfoundland, bbls.	gal.	—	.35
Copra, bulk, coast	lb.	.0245	.0250
Corn, tanks, mills	lb.	.10¼	.10¾
Cottonseed, crude, tanks, mill.....	lb.	.09¼	.09½
PSY	lb.	—	Nom.
Degras, Amer., bbls.	lb.	.05¼	.06
English, bbls.	lb.	.04¾	.05½
Neutral, bbls.	lb.	.08	.11
Greases, choice white bbls., N. Y.	lb.	.06¾	.07
Yellow	lb.	.05¾	.06
House	lb.	.05¾	.06
Lard, City	lb.	—	.12¼
Compound tierces	lb.	.12½	.12¾
Lard Oil,			
Extra, bbls.	lb.	—	.11½
Extra, No. 1, bbls.	lb.	—	.10
No. 2, bbls.	lb.	—	.09¾
Linseed, raw, bbls., spot	lb.	.1020	.1060
Tanks, raw	lb.	—	.0960
Boiled, 5 bbls. lots	lb.	—	.1140
Menhaden, Crude, tanks, Balt.	gal.	.36	Nom.
Oleo Oil, No. 1, bbls., N. Y.	lb.	—	.14%
No. 2, bbls., N. Y.	lb.	—	.13%
Olive, denatured, bbls., N. Y.	gal.	.78	.80
Fooths, bbls., N. Y.	lb.	.08¾	.08¾
Palm	lb.	.04¼	.04½
Palm Kernel, casks, denatured	lb.	.04½	Nom.
Peanut, domestic tanks	lb.	.09¾	Nom.
Red Oil, distilled bbls.	lb.	.09¾	.10%
Saponified bbls.	lb.	.09¾	.10%
Tanks	lb.	—	.08¾
Soya Bean, domestic tanks, N. Y.	lb.	—	.09
Stearic Acid,			
Double pressed	lb.	.10	.11
Triple pressed, bgs.	lb.	.12¾	.13¾
Stearine, oleo bbls.	lb.	.11½	.11¾
Tallow, special, f.o.b. plant	lb.	—	.06¾
City, ex. loose, f.o.b. plant	lb.	—	.06¾
Tallow, oils, acidless, tanks, N. Y.	lb.	—	.09½
Bbls., c/1 N. Y.	lb.	—	.09¾
Whale, refined	lb.	.07¾	.08



No. 170
**PORTABLE SOAP
SPRAYER**

TAKE THE **RUB** OUT OF **SCRUBBING**

**Spray Soap or Cleaner
WITH
A Dobbins Superbilt
High Pressure
SOAP SPRAYER**

The cleaning solution penetrates into the floor surface, cracks and pits that are not touched with brush or mop. The film of soap dissolves the dirt. Pick it up with a moist mop and you have a quick clean job.

*Write NOW for Descriptive
Circular*

**Dobbins Manufacturing Co.
Dept. B North St. Paul, Minn.**



**Why not have your own personal
copy of **SOAP** every month?
... delivered to your home or
desk ... the cost is small and
the service is great.**

Annual Subscription: \$3.00



MacNAIR-DORLAND CO., Inc.
Publishers

254 WEST 31st STREET

NEW YORK

(As of January 9, 1936)

Essential Oils

Almond, Bitter, U. S. P.	lb.	\$2.00	\$2.50
Bitter, F. F. P. A.	lb.	2.25	.75
Sweet, cans	lb.	.58	.60
Anise, cans U. S. P.	lb.	.55	.60
Apricot, Kernel, cans	lb.	.22	.25
Bay tins	—	1.25	1.50
Bergamot, coppers	lb.	1.75	2.00
Artificial	lb.	1.00	1.30
Birch Tar, rect. tins	lb.	.70	.75
Crude, tins	lb.	.14	.16
Bois de Rose, Brazilian	lb.	1.25	1.60
Cayenne	lb.	2.40	2.90
Cade, cans	lb.	.26	.30
Cajuput, native, tins	lb.	.50	.60
Calamus, tins	lb.	3.25	3.50
Camphor, Sassy, drums	lb.	—	.19
White, drums	lb.	—	.20
Cananga, native, tins	lb.	2.75	2.90
Rectified, tins	lb.	3.25	3.50
Caraway Seed	lb.	1.95	2.20
Cassia, Redistilled, U. S. P.	lb.	1.10	1.15
Cedar Leaf, tins	lb.	.60	.70
Cedar Wood, light, drums	lb.	.20	.22
Citronella, Java, drums	lb.	.26	.27
Citronella, Ceylon, drums	lb.	.23	.24
Cloves, U. S. P., tins	lb.	.90	.95
Eucalyptus, Austl., U. S. P., cans	lb.	.31	.32
Fennel, U. S. P., tins	lb.	1.00	1.25
Geranium, African, cans	lb.	4.75	6.75
Bourbon, tins	lb.	5.50	7.00
Hemlock, tins	lb.	.70	.75
Lavender, U. S. P., tins	lb.	3.25	7.00
Spike, Spanish, cans	lb.	1.20	2.00
Lemon, Ital., U. S. P.	lb.	1.65	2.10
Lemongrass, native, cans	lb.	.60	.62
Linaloe, Mex., cases	lb.	1.35	1.50
Nutmeg, U. S. P., tins	lb.	1.20	1.35
Orange, Sweet W. Ind., tins	lb.	2.40	2.50
Italian cop	lb.	2.75	4.00
Distilled	lb.	—	.75
Origanum, cans, tech.	lb.	.70	.75
Patchouli	lb.	5.25	6.00
Pennyroyal, dom.	lb.	1.65	1.90
Imported	lb.	1.30	1.40
Peppermint, nat., cases	lb.	1.85	2.20
Redis., U. S. P., cases	lb.	2.10	2.30
Petit, grain, S. A., tins	lb.	1.00	1.15
Pine Needle, Siberian	lb.	.90	.95
Rose, Natural	oz.	5.50	18.00
Artificial	oz.	2.00	3.00
Rosemary, U. S. P., tins	lb.	.34	.45
Tech., lb. tins	lb.	.30	.40
Sandalwood, E. Ind., U. S. P.	lb.	5.00	5.50
Sassafras, U. S. P.	lb.	.75	1.00
Artificial	lb.	.45	.50
Spearmint, U. S. P.	lb.	1.65	1.70
Thyme, red, U. S. P.	lb.	.58	1.02
White, U. S. P.	lb.	.65	1.10
Vetivert, Bourbon	lb.	11.50	14.00
Ylang Ylang, Bourbon	lb.	4.60	7.00

Aromatic Chemicals

Acetophenone, C. P.	lb.	\$1.25	\$2.25
Amyl Cinnamic Aldehyde	lb.	1.75	2.50
Anethol	lb.	1.00	1.10
Benzaldehyde, tech.	lb.	.60	.65
U. S. P.	lb.	1.20	1.30
Benzyl, Acetate	lb.	.56	1.00
Alcohol	lb.	.65	1.15
Citral	lb.	2.40	2.60
Citronellal	lb.	2.05	2.50
Citronellol	lb.	2.10	2.65
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.10	3.30
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	—	.85	1.25
Eucalyptol, U. S. P.	lb.	.50	.55
Eugenol, U. S. P.	lb.	2.00	2.50
Geraniol, Domestic	lb.	1.00	2.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	2.00	2.50
Heliotropin	lb.	2.00	2.10
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.00	2.50
Ionone	lb.	3.60	6.50
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	1.65	2.25
Linalyl Acetate	lb.	1.85	4.25
Menthol	lb.	3.50	3.60
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.15	3.20
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	4.75	6.00
Ketone	lb.	5.00	6.50
Xylene	lb.	1.50	2.50
Phenylacetaldehyde	lb.	4.80	8.00
Phenylacetic Acid, 1 lb., bot.	lb.	3.00	4.00
Phenylethyl Alcohol, 1 lb. bot.	lb.	4.00	4.50
Rhodinol	lb.	5.75	8.00
Safrol	lb.	.60	.62
Terpineol, C. P., 1,000 lb. drs.	lb.	.33	.35
Cans	lb.	.36	.37
Terpinyl Acetate, 25 lb. cans	lb.	.80	.90
Thymol, U. S. P.	lb.	1.40	1.50
Vanillin, U. S. P.	lb.	3.75	4.00
Yara Yara	lb.	1.30	2.00

Insecticide Materials

Insect powder, bbls.	lb.	.17	.20
Concentrated Extract			
5 to 1	gal.	1.20	1.25
20 to 1	gal.	4.00	4.10
30 to 1	gal.	5.85	6.00
Derris, powder—4%	lb.	.41	.45
Derris, powder—5%	lb.	.46	.50
Cube, powder—4%	lb.	.34	.37
Cube, powder—5%	lb.	.40	.42

Gums

Arabic, Amb. Sts.	lb.	.10 1/4	.10 3/4
White, powdered	lb.	.13 3/4	.13 3/4
Karaya, powdered No. 1	lb.	.09 1/2	.10
Tragacanth, Aleppo, No. 1	lb.	1.20	1.25
Sorts	lb.	—	.25

Waxes

Bees, white	lb.	.34	.36
African, bgs.	lb.	.24	.25
Refined, yel.	lb.	.28	.30
Candelilla, bgs.	lb.	.16	.17
Carnauba, No. 1	lb.	.46	.47
No. 2, yel.	lb.	.43	.44
No. 3, chalky	lb.	.36	.37
Ceresin yellow	lb.	.36	.38
Paraffin, ref. 125-130	lb.	.04 1/4	.04 1/2

ABC

CRESYLIC ACID AROMATICS

PHENYL ETHYL ALCOHOL
GERANIOL
CITRONELLOL
ACETOPHENONE

BENZYL ACETATE
BENZYL ALCOHOL
BENZOPHENONE
AMYL CINNAMICALDEHYDE

For Soaps, Perfumes, Cosmetics, etc.

AMERICAN-BRITISH CHEMICAL SUPPLIES, Inc.
180 MADISON AVE., NEW YORK, N.Y.

ASSOCIATED COMPANIES

KAY-FRIES CHEMICALS, INC. CHARLES TENNANT & CO. (CANADA) LTD.
NEW YORK, N.Y. TORONTO, CANADA



MEMBERS NEW YORK PRODUCE EXCHANGE

RAW MATERIALS for the soap and allied industries

Consider this when you choose your source of supply

Every conceivable raw material for the manufacture of soap or similar products is carried in stock and ready for immediate delivery to your door. Eastern is serving the leaders of the industry and stands ready to give you the same prompt and efficient service—and at a price that is right.

COCOANUT OIL • TALLOW • OLIVE OIL • FOOTS

CAUSTIC SODA

liquid . . flake . . solid

CAUSTIC POTASH

DRUMS

TANK WAGONS

TANK CARS

EASTERN INDUSTRIES, INC.

VEGETABLE OILS, ANIMAL OILS, FATS, CHEMICALS

125 Bergen Street.

Harrison, N. J.

CASTOR OIL
COCONUT OIL
CORN OIL
COTTONSEED OIL
LARD OIL
NEATSFOOT OIL
OLEIC ACID-RED OIL
OLIVE OIL
OLIVE OIL FOOTS
PALM OIL
PALM KERNEL OIL
PEANUT OIL
RAPESEED OIL
RESIN
SALAD OIL
SOYA BEAN OIL
SESAME OIL
TEASEED OIL
WHITE OLEINE
FATTY ACIDS
STEARINE
STEARIC ACID
GREASE
TALLOW

DRY CLEANING SOAPS AND SOLVENTS (From Page 28)

that the grayish appearance of some whites that have come from chlorinated solvents is due to this positive or negative charge of electricity which exists in the particles of soil in the solvent.

Of course, the use of a soap would have sufficient activity to aid materially in removing water soluble stains. This makes it particularly a difficult problem in view of the activity of moisture in combination with the chlorinated hydrocarbons. For this reason the most stable solvents should be used.

We have endeavored in the foregoing to indicate a number of the items that are considered essential for the proper type of soaps to be used with chlorinated hydrocarbon dry cleaning solvents. All of these points are based entirely on the contacts made in the field with many dry cleaners and tests made by the solvent manufacturers. The soap manufacturer should bear in mind that the solvent chemist is not a soap chemist any more than the soap chemist is a solvent chemist, and probably no solvent manufacturer maintains in his employ a single soap chemist.

Nor is the solvent manufacturer interested in the manufacture of a soap. The solvent manufacturers, however, are ready and willing to give as much data and assistance as possible regarding the solvents of their manufacture and the possible pitfalls in connection with their use with soap, as the solvent manufacturers are very much interested in any product which will increase the efficiency of the materials they manufacture.

It naturally follows that the opportunity for the soap manufacturer in developing any materials for the dry cleaning industry is very applicable at the present time, and it should be borne in mind that any soap which meets with success with chlorinated solvents in the dry cleaning field, will also find wide usage in industrial work where there has been a demand for chlorinated solvent soaps for some time.

Thomas R. Farrell and Frazer V. Sinclair, publishers of *The Drug and Cosmetic Industry*, New York, are the new publishers of *Toilet Requisites*, established twenty years ago by the late Frederick J. Pope. The appointment was made by Helen M. Pope, executrix of the estate. Mr. Sinclair was associated with Mr. Pope a number of years ago, having been the first advertising director of *Toilet Requisites*.

J. C. Ackerman, Pittsburgh distributor for several chemical companies, with offices at 1230 Gulf Building, moved January 1st to a new and larger office at 815 Gulf Building.

Trisol Chemical Co., 447 East Fort St., Detroit, has been organized by G. C. Parker to act as a distributor of cleaning compounds.

How Much is Faster Wetting Worth to You?

If you make Household Cleaning Compounds?

ALPHASOL OT has the ability to do a fast, thorough cleaning job. It has high detergent power . . . makes glassware shine and sparkle . . . speeds the washing of dishes, tile, bathtubs . . . and the degreasing of metals.

If you make Insecticides or Disinfectants?

ALPHASOL OT will reduce the surface tension of your product . . . give it faster, deeper penetrability.

If you make Waxes or Polishes?

ALPHASOL OT, being soluble in water, organic solvents, waxes and oils, will form smoother emulsions and increase the penetrability of your product.

ALPHASOL* OT

is NEW—developed by American Cyanamid Research to meet the demand for a more effective wetting and penetrating agent. It is finding application in an increasing number of industries. Return the coupon and a sample will be mailed at once.



*Trade Mark.

**AMERICAN CYANAMID &
CHEMICAL CORPORATION**
30 ROCKEFELLER PLAZA, NEW YORK, N. Y.

American Cyanamid & Chemical Corporation
30 Rockefeller Plaza, New York, N. Y.

Sirs: Please send me a sample of Alphasol OT, for use in

Name
Firm Title
Address
City State

... if you buy

ROSIN

... read this!

A NEW and better ROSIN suitable for the manufacture of soaps, disinfectants, and associated products, . . . available at competitive prices . . . clean, clear, and much easier to handle.

We are now producing at our Covington, Va. plant, large quantities of rosin in the form of ABIETIC ACID. It is available as a yellow crystalline powder with the following specifications:

Melting Point Approximately 120° C.

Acid Number 185

Abietic Acid Content 88-92%

Let us send you samples, prices and further details.

Send us the coupon below.

INDUSTRIAL CHEMICAL SALES CO., INC.

230 PARK AVE.

NEW YORK

INDUSTRIAL
CHEMICAL SALES CO.
230 Park Ave., New York

Gentlemen—We are interested
in your new rosin (abietic acid).
Please send us oz. sample and prices.

.....
.....
SOAP

Also the manufacturers of

INDUSOIL

The standard blend of fatty acids.

NUCHAR

The superior bleaching and deodorizing carbon.

PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

Stable Oxygen Soap Powders

SOAPS containing mild bleaching agents such as per-compounds should be sufficiently stable to retain the oxygen until needed. It is claimed that the addition of special silicates (German Patent No. 598,135) will produce the desired result. These alkali silicates are stated to be water-soluble and highly stable. The method of production is to treat a partially crystallized melt of an alkali metasilicate with solid hydrated sodium silicate, i.e. waterglass, using a ratio of silicate to soda higher than 1:1. After setting hard, the mixture is ground to powder. For example 120 parts by weight of commercial waterglass of 38° Be. is mixed with 30 parts by weight of caustic soda until the latter is completely dissolved. The solution is stirred and allowed to cool. When crystals begin to form a further 18 parts by weight of powdered waterglass is introduced and the mixture left to solidify, after which it is ground to powder.

The alkali silicate compounds just described are said to be excellent stabilizers for active oxygen bleaching preparations of all kinds, including alkali peroxides, hydrogen peroxide, perborate, persulfate, perphosphate, persilicate, as well as hypochlorite compounds, whether mixed or not with wetting or emulsifying agents. They are described as superior to the ordinary liquid silicate preparations used for textile work, in that there is no formation of precipitate adhering to the fibers. They are useful as general detergents. A formula for a powdered soap product is as follows:

	Parts by Weight
New alkaline silicate.....	5
Sodium perborate	10
Soda ash	25
Soap powder	60

The perborate is reported stabilized by the silicate and the mixture has excellent cleansing and bleaching properties. Up to 0.5 per cent of free caustic soda may be present. The proportion of perborate may be reduced

to 5 per cent without materially altering the results, assuming that soft water is in use.

A stabilizer is also prepared from ordinary commercial silicate by converting it from tetra- to trisilicate by treatment with caustic soda; 100 parts by weight of the trisilicate is then mixed with 10 parts of trisodium phosphate and 90 parts of soda ash, the mixture being cooled and ground. A powdered soap product has the following composition:

	Parts by Weight
Stabilizing mixture	5
Soap powder (30-35% fatty acids)....	85
Sodium perborate	5
Sodium pyrophosphate	5

The perborate is stabilized partly by the special stabilizer and partly by the pyrophosphate, which has the property of delaying the release of oxygen from perborates and peroxides. If the tetrasilicate is converted to the monosilicate, a more easily water-soluble powder is obtained.

A fat-emulsifying agent or solvent may also be incorporated. Some soapmakers have expressed the view in this connection that the fatty alcohol sulfates are less efficient than is often claimed for them. They advocate instead preparations of the kind described plus a suitable emulsifying agent. The most suitable emulsifying agent so far tested seems to be Turkey red oil, which has excellent properties for the purpose and is quite stable. For example, an improved type of turpentine as solvent is first emulsified with the Turkey red oil, well mixed with the stabilizer, and finally incorporated with the soap. If the latter is made by the half-boiled process, the soap base is first prepared, and the turpentine-Turkey red oil emulsion and other materials added. Soft water is essential.

This type of product is illustrated by the following formula: Dry-saponify 50 parts by weight of distilled fatty acids with 20 parts by weight of soda ash. Before

the mass sets, add a mixture of 6 parts of Turkey red oil, 4 parts of turpentine, 10 parts of sodium perborate, 5 parts of sodium metaphosphate and 5 parts of stabilizer. After grinding, the powder which contains 50 per cent of fatty acid, may be reduced to one of 30 per cent by mixing it with a 10 per cent fatty acid-soap powder.

Soft soaps may be prepared similarly, using caustic potash in place of soda, and taking special care to see that no unsaponified fat is present, but preferably a little free alkali. These products are cheaper and more efficient than the ordinary per-salt preparations, and are claimed to be superior to the fatty alcohol sulfates, especially in the textile industry, always provided soft water is available. *Perfumery and Essential Oil Record* 26, 443-4 (1935).

When refining vegetable or animal fats by saponification of the fatty acids with dilute alkali and subsequently extracting the soap with dilute alcohol, excessive dilution of the alcohol in the later distillation step for its recovery is avoided by evaporating the fatty acid soap solution prior to its extraction, to such an extent that the concentration of the alcohol in the distillate is equal to or higher than that of the aqueous alcohol originally used for extracting the soap. The procedure is to vacuum-dry the neutralized oil to cause separation of the soap as flakes and separate the soap by extraction with alcohol. The soap flakes are first separated from the oil by settling, centrifuging, filtering etc., and afterward treated alone with the alcoholic solvent, or the soap stock is first separated from the oil by settling, etc., and then subjected to vacuum-drying, followed by alcoholic extraction. Drying the soap stock facilitates separation of the mucins, lecithin, etc. To prevent foaming when distilling off the last portions of alcohol from the soap paste, sulfuric or other acid may be added prior to the distillation. Metallgesellschaft A.G. British Patent No. 430,381.

The reaction mixture obtained by treating oils and fats or fatty acids with sulfuric acid is separated from the excess of sulfuric acid and treated with one or more non-reacting solvents such as carbon tetrachloride, benzene, etc. Water or dilute aqueous salt solution is added before neutralization and the two layers allowed to separate. The sulfuric esters are present in the solvent layer and the sulfonation products are in the aqueous layer. The layers are separated by the usual methods. Chemische Fabrik Stockhausen & Cie. German Patent No. 614,702.

Moistening oil-bearing seeds and then kneading, possesses distinct advantages in the process of extracting the oil. With sunflower-seed oil the optimum moisture content is 17-18 per cent. Heating the pulp during the kneading with water will increase the extraction efficiency and decrease the time required for the operation on account of the increase in the plasticity of the pulp and the decrease in the viscosity and surface tension of the oil. A. Goldovskii. *Chimie & Industrie* 34, 642-3 (1935).

FRENCH LIQUID SOAP COMPOSITION

The composition and method of manufacture of three liquid soaps made in France were recently given as follows:

	A	B	C
Coconut oil	21.0	...	6.0
Soya bean oil.....	...	8.0	12.0
Caustic potash, 50%....	9.5	4.6	9.6
Sugar	12.0	8.0	...
Borax	2.0	...	...
Glycerine .....	...	6.0	12.0
Potassium carbonate....	...	2.0	...
Water	55.5	71.4	60.2
Essence of lavender....	...	...	0.1
Linalyl acetate .....	...	...	0.1

Heat the oil to about 70° C. and add the caustic potash slowly with agitation until saponification is complete. Water added before the introduction of all of the alkali arrests foaming and is advisable for that reason, particularly if cottonseed oil is used. When saponification is complete, add sugar, glycerine, etc., and finally adjust the water content to the desired proportion. Let cool and add coloring and perfume to suit. Soft or distilled water is advantageously used to avoid turbidity from insoluble soaps. *Les Matieres Grasses* 27, 10644 (1935).

Sulfonated castor oil has been recommended for addition to liquid soaps to help prevent precipitation of solid matter on standing. Castor oil is of service in the soap industry in the preparation of transparent soaps and of soda soft soaps. One of the latest developments is the use of castor oil soap (sodium ricinoleate) as a constituent of tooth pastes. It is particularly well suited for this purpose because of the very slight degree of hydrolysis it undergoes when dissolved in water. *Perfumery & Essential Oil Rec.* 26, 441 (1935).

A mixture of a definite crystalline sodium metasilicate and another alkali metal salt is made by preparing a solution of a composition corresponding to the mixture, establishing a temperature near the melting point of the sodium metasilicate but slightly under this and above the fusion temperature of the crystalline metasilicate of next lower melting temperature. The solution is agitated and seeded with sodium metasilicate of a composition corresponding to that of the metasilicate in the mixture. Philadelphia Quartz Co. Canadian Patent No. 354,698.

Experiments showed that the fatty alcohol sulfates are excellent wetting and spreading agents for use with fungicides and insecticides. They may be effective at dilutions of 0.025 per cent. They are useful in preparing emulsions, as they can be used in acid or alkaline solution and they withstand hard water. Sodium lauryl sulfate and sodium oleyl sulfate appeared to be best for wetting and spreading purposes, the former for use with dusts, the latter with sprays. W. H. Tisdale. *Agr. News Letter* 3, 4-5 (1935).

Shampoo Composition

SHAMPOO preparations are offered in a great variety of products in Europe as well as in the United States. The composition of some of the European preparations, discussed recently in *Soap, Perfumery & Cosmetics* of London by S. P. Jannaway, offers an interesting comparison with the make-up of American products. As in the United States, liquid shampoos are the most popular, but a ready sale is also found for the powdered preparations, and in some instances for those in jelly form.

The ordinary powdered shampoo, based on a high content of pulverized soap, presents no special difficulties in formulation or manufacture, according to Mr. Jannaway. To the soap may be added such ingredients as sodium perborate, borax, soda ash, powdered henna, powdered camomile flowers, etc. The following formulas are suitable for this type of product:

1. Dry soap powder.....64 parts
Sodium perborate 4 parts
Sodium silicate 4 parts
2. Dry soap powder60 parts
Borax30 parts
Sodium perborate10 parts
Saponin 2 parts

The sodium perborate acts as a mild bleaching agent, while borax is said to impart a sheen to the hair. The saponin is a strong foaming agent. Powdered henna may be used to the extent of 5-10 per cent. Perfuming can be carried out with such stable products as heliotropin, musk xylol, geranium, lavender, etc., or with practically any alkali-proof compound designed for use in soap. Lime-dispersing agents may also be included. New products marketed in Germany for this purpose are formed by the condensation of protein degradation products (peptides), and higher fatty acids. The incorporation of such agents facilitates efficient washing and rinsing of the hair.

Soapless powdered shampoos are based on the sodium salts of sulfated fatty alcohols such as Gardinol, and products of a related nature like the Igepons. Fillers may be added, as in the following:

1. Sodium lauryl sulfate40 parts
Borax20 parts
Boric acid (adjusted to pH 7)....20 parts
2. Sodium lauryl sulfate50 parts
Anhydrous Glauber's salt50 parts
Saponin, special grade 1 part

The use of bentonite in conjunction with the above sulfated products, is protected by patent.

Dry shampoo powders to be applied and brushed out are not used extensively, but have special application when it is desirable not to wet the hair too frequently.

Typical formulas are as follows:

1. Rice starch75 parts
Borax20 parts
Sodium sesquicarbonate 5 parts
2. Rice starch80 parts
Silica gel15 parts
Trisodium phosphate 5 parts

The ingredients should be reduced to as fine a powder as possible. Fullers' earth, colloidal clay, powdered orris root and similar substances may also be used in compounding. Perfume is simply added while mixing.

Liquid shampoos owe their popularity to their property of being quick-to-use and easy-to-rinse. Potash-coconut oil soaps, or a mixture of coconut and olive oil soaps form the basis of these products. A small proportion of castor oil is also occasionally added, and other materials such as glycerine and alcohol. The following formula is one much used in Europe:

- | | | |
|------------------------|------|-----------------|
| Potash soft soap..... | 50 | parts by weight |
| Potassium carbonate .. | 5 | parts by weight |
| Glycerine | 7 | parts by weight |
| Benzaldehyde | 0.25 | parts by weight |
| Distilled water | 938 | parts by weight |

The soft soap is dissolved in half the water with gentle heating. The potash, which is used to keep the shampoo clear,—the glycerine and benzaldehyde are added to the rest of the water. The two solutions are then mixed by stirring, and the product is left for a week before decanting, filtering and bottling. The almond odor disappears at first, owing to the splitting up of the benzaldehyde into sodium benzoate and benzyl alcohol, but later reappears owing to the oxidation of the alcohol back to the aldehyde. The soap content in the above formula may be increased if desired, and alcohol added. Instead of benzaldehyde, a stable fougere or similar compound can be used. Pine tar may be incorporated. A novel ingredient for imparting a pleasantly "medicated" odor is isothymol.

In manufacturing liquid shampoos, careful control at all points is essential. Turbidity must be avoided at all costs and for this reason distilled water should be used and the soap itself must be completely saponified. In some cases shampoos should be aged for 15 to 30 days, then decanted into a tank fitted with a refrigerating coil, chilled to a low temperature, and finally filtered through asbestos. The period of aging can no doubt be reduced by first running the shampoo through a colloid mill or homogenizer.

THE availability of raw materials such as the sulfated fatty alcohols, improved sulfonated oils, and saponines, has served to focus more attention on the market possibilities of soapless shampoos. The sulfonated oils

most used are sulfonated olive oil and sulfonated castor oil. These must be high-grade and should give clear solutions in all proportions in water. For general cleansing of the scalp they are claimed to be superior to soap solution, especially as they do not form lime soaps in hard water. Their chief disadvantage is that they do not lather, but this can be remedied by the addition of a small proportion of saponin.

Sulfonated castor and olive oils may suitably be employed in the proportions of 30 and 20 parts respectively to every 50 parts of distilled water. Under no circumstances should alkali be added, as this is entirely contrary to the idea of this type of shampoo. The product should be neutral or slightly acidic. Properly made, it will always be clear and sparkling. To prevent over-drying of the scalp with this shampoo, sometimes a few per cent of liquid paraffin are added. This entails emulsification with a nonalkaline emulsifying agent such as 1.5 per cent of ethylene glycol.

Sapamines are said to resemble soap in wetting and cleansing properties. Sapamines, like saponin, foam strongly. They are completely resistant to calcium hardness. Acids have no effect on these compounds but alkalinity above pH 7.6 causes precipitation. The following is a suggested formula:

Sapamine citrate	15 parts
Citric acid	1 part
Saponin	1 part
Glycerine	1 part
10% Alcohol	82 parts

The fatty alcohol sulfates can be used in dilute solution as shampoos, with no other addition than a water-soluble perfume.

A spirit or "dry" shampoo may be made as follows:

Potassium carbonate	10 oz.
Ammonium carbonate	10 oz.
Saponin	5 oz.
Industrial alcohol	4½ gal.
Water	5½ gal.

Perfume and color to suit

Such a shampoo is used without additional water. It is merely a weakly alkaline alcoholic lotion. Soapless shampoos offer rather good points for advertising purposes and it is probable that they will receive wider use abroad.

Sulfonation of sunflower-seed oil increases to a maximum at a ratio of 30 per cent sulfuric acid on the basis of the weight of oil taken, at a temperature of 20° C. and 12 hours' contact. The degree of sulfonation also passes through a maximum with increasing time. The time for maximum sulfonation decreases with increasing sulfuric acid concentration. The optimum conditions determined for maximum sulfonation were 20 parts of acid to 100 parts by weight of oil, at 20° C. for a period of contact of 12 hours. C. Otin and M. Dima. *J. Intern. Soc. Leather Trades Chem.* **19**, 443-54 (1935).

A natural animal fat may be characterized by its rate of melting. The method is to liquefy the fat under definite conditions, place it in a narrow glass vessel of given dimensions and then cool to 0° C. for a given time. When the vessel containing the solid fat is placed in hot water the rate at which the fat melts is higher according to whether it contains more easy-melting fatty acids such as oleic, and lower according to whether it contains more high-melting fatty acids such as stearic and palmitic. To determine the rate of melting a ball of 6.5 mm. diameter, weighing 1 gram is placed on the surface of the solidified fat, the vessel rapidly transferred from the cooling medium to a heated medium and the time required for the ball to reach the bottom of the glass vessel is noted with a stop watch. The fat layer was 50 mm. thick in a vessel having an inside diameter of 7.5 mm. B. Vasil'ev. *Chimie & Industrie* **34**, 642 (1935).

The determination of the Hübl iodine number can be appreciably hastened without affecting its accuracy, by keeping the sample in contact with the Hübl reagent for 20 minutes at 60° C. This is applicable to oils having iodine numbers of 15-133. The time required for the preparation of the reagent can be shortened by heating for 2 hours at 80-90° C. and then cooling as usual to atmospheric temperature. This produces a stable solution and dispenses with the necessity of keeping the reagent for a long period at atmospheric temperature before use. For the determination of the iodine number of oleic acid by this method, the air should first be swept out of the reaction flask with carbon dioxide. A. Klyuchevich and A. Vishnevskaya. *Chimie & Industries* **34**, 642 (1935).

Moisture in seeds, pulp and oil cake can be estimated by measurements of refractive index. Grind the sample, weigh 2 grams into a heavy centrifuge tube and add 5 cc. of pure 92.5 per cent glycerol (*n* 1.4630), using a pipet fitted into a stopper which fits tightly into the neck of the centrifuge tube. This is to avoid absorption of atmospheric moisture. Triturate for 5 minutes with a glass rod, also passing through a stopper fitted into the neck of the tube, and immediately measure the refractive index of the glycerol without filtering. Calculate moisture from the difference in refractive index. The method is accurate to about 0.2 per cent. P. Zaichenko and B. Rekhin. *Chimie & Industrie* **34**, 641 (1935).

Preliminary experiments show the possibility of a continuous process for the refining of fats by neutralization of the fats with the aid of De Laval centrifugal apparatus. The fat and alkaline solution are fed continuously into the neutralizer and the soap stock separated from the oil. Separation was best at 85-90° with the addition of water or salt solution. A. Schmidt and O. Mikhailovskaya. *Masloboino Zhirovoe Delo* **11**, 255-8 (1935).

Milled Transparent Soaps

CONTROLLED addition of rosin, and careful cooling allow the manufacture of milled transparent soap without the need of adding alcohol, glycerine, sugar, soda crystals and the like, which are usually employed to prevent crystallization. In a new process described in German Patent No. 475,927, the raw materials for making the soap are first purified and then treated with pure alkali in the presence of sufficient quantities of rosin to retard crystallization. Saponification is carried out without the need of adding the usual reagents which aid in the formation of a transparent soap, so that the cost of manufacture is appreciably reduced.

The stock mixture is of the usual composition used for making transparent soap. It may or may not contain coconut oil and castor oil. Saponification is carried out in the presence of rosin. The soap is fitted to practical neutrality. In any event it should contain only inappreciable quantities of free alkali and should be obtained in a highly concentrated condition. The mixture should contain 64-66 per cent of soap paste. A very thick mass is formed. Such a soap will normally congeal to an opaque mass, but when it is subjected to cooling in thin layers, it becomes transparent. The principal requisite is that the temperature of the hot liquid soap be reduced very quickly to room temperature, so that crystallization cannot occur. The presence of alkali resinate retards crystallization. Cooling is best accomplished on strongly cooled mixing rolls.

The soap obtained in this manner is dried exclusively in an air current at ordinary temperatures, since heating the soap with warm air tends to cause formation of crystals. In dried form the soap contains about 70 per cent of fatty acids. It is fed into the plodders in this condition and worked up in the usual manner to toilet soap. The head of the plodder should be water-cooled and the speed of the screw should be about half that normally used in processing toilet soap.

A suitable formula for the above type of soap is:

	Parts by Weight
Tallow	61
Coconut oil	18
Castor oil	11
Rosin	10

The fat charge is saponified with 45.8 parts of pure caustic soda solution of 39° Be. Another fat mixture consists of 92 parts of crude palm oil and 8 parts of rosin. This mixture is saponified with 42.9 parts of caustic soda solution of 38° Be.

In dilute soap solutions such as are used in practical washing, the theory is advanced that the hydroxyl-ion concentration cannot serve as a measure of the quantity of alkali formed by hydrolysis, and therefore cannot be used to calculate the quantity of the hydrolyzed soap.

The difference between the hydroxyl-ion concentration and the quantity of hydrolyzed soap is explained by the ability of certain structural component parts of a dilute soap solution to adsorb various substances, including hydroxyl-ions and fatty acids. The degree of hydrolysis is greater than that calculated on the basis of the pH actually obtained. A further concept is that the adsorption of fatty acids and hydroxyl-ions varies with the nature and concentration of the individual fatty acid salts, the temperature of the solution, etc. B. Tyutyunnikov and N. Kas'yanova. *Masloboino Zhirovoe Delo* 11, 312-16 (1935).

About 0.2 per cent of sodium chloride added to sodium oleate increases lathering power and decreases surface tension. Over 2 per cent is necessary to cause even a small increase in emulsifying power. The addition of 2 per cent of soda ash to soap sharply increases lathering power and decreases surface tension. Sodium metasilicate and trisodium phosphate have little influence at low concentrations but are effective in the ratio of 1 : 1. N. Petrova. *Masloboino Zhirovoe Delo* 11, 142-8 (1935).

The best results in hardening whale and fish oils were obtained with alkali-refined oil and a purified catalyst containing 0.33 per cent of nickel, by heating to 200° C. in an autoclave for about 3 hours. Activated carbon, Tonsil, kieselguhr, copper dust, iron dust and aluminum dust were used as catalyst carriers. F. Pinsker. *Masloboino Zhirovoe Delo* 1935, 157-9.

The refining of palm oil direct from the extractors in a continuous process can be carried out by the Titan Sludge Separator, which is a centrifugal machine capable of delivering refined palm oil of a purity equal to that of the existing standard, at the rate of 200 gallons per hour. There is no appreciable loss of oil in the water discharge. The output of oil can be increased to 300 gallons per hour by heating and agitating the crude mixture in a tank and then feeding it to the centrifuge uniformly at a constant high temperature. T. A. Buckley and J. L. Greig. *Malayan Agr. J.* 23, 362-8.

When sunflower seed pulp is heated prior to extraction of the oil, the chemical constant of the latter are changed. The acidity decreases by 5 to 12 units and the iodine number increases by 8 to 10 units. These changes are from the values for crude pulp. I. Kolpakov. *Chimie & Industrie* 34, 641-2 (1935).

Oleic acid is recovered by passing chlorine through the solution with or without the addition of small amounts of sodium bisulfite or sodium sulfite. B. S. Fedotov. Russian Patent No. 35,308.

HOUCHIN SOAP MACHINERY

Presenting a New

ROLLER MILL



for
**TOILET SOAP
and
SOAP FLAKES**

HERE is the newest development in American mills—a four roll, chilled iron, water cooled machine of unusually large capacity. If you are interested in increasing your production and improving the quality of your finished soaps it will be worth while investigating this mill fully. The cost is surprisingly low—in fact this mill may be bought for less than the price of some smaller mills of lower capacity.

Special features include rolls 18" in diameter by 40" in length, made of the finest American chilled iron, machined inside and out; no stuffing boxes required; spur type roll gears with all gears running in oil pockets; bronze lined bearings; a hard-wood hopper; frame entirely enclosed and mounted on a substantial bed plate; supplied with two tool steel knives, one slotted and one straight edged. No soap or dirt can possibly get inside this mill. More careful control of temperature eliminates blistered cakes.

Houchin manufactures the most complete line of soap machinery in the world. Send for a catalog in which all of our soap equipment is illustrated and described.

HOUCHIN MACHINERY CO.

HAWTHORNE
NEW JERSEY

FATTY ALCOHOL SULFATES DISAPPOINT

Practical laundry tests in which the detergent efficiency of the fatty alcohol sulfates was compared with that of laundry soap, indicated that the fatty alcohol sulfates do not always live up to expectations. Because of their high price as compared with soap it is claimed that they can be used in much smaller concentration, for example, one-sixth that of soap. Particularly at this low concentration the comparison becomes decidedly unfavorable. It is believed that in laundering certain classes of soiled material such as white goods, the very lack of alkalinity in the synthetic detergents, which is so much talked about, becomes a disadvantage as far as detergent efficiency is concerned. Used on white goods at or near the boiling point, the result is apt to be a gray finish. The conclusion is reached that the ideal detergent is yet to be found, since the synthetic products, either alone or added to soap, still leave something to be desired. Oskar Uhl. *Seifensieder-Ztg.* 62, 687-9, 719-20 (1935).

— ♦ —
A movement has been started in India to urge the Central Government to set up standards for the production of laundry soap. While the Soapmakers' Association approves the idea of all soap manufactured in India being of good quality, they admit that the bulk of the household and laundry soap now made in the country is definitely below any recognized standard. If all manufacturers were required to meet certain set standards, a number of them would have to shut up shop, and a big market would be thrown open to the makers of standard soap. Foreign concerns would be given a decided advantage. The Indian Soapmakers' Association is therefore opposed to any such action by the government until there is time for improvement in home production to be brought about gradually. *Indian Soap J.* 2, 84 (1935).
— ♦ —

The Wijs method gives higher iodine numbers than the Rosenmund-Kuhnhenn method for polyethylenic acids such as the highly unsaturated acids of sardine oil, and for linolenic and linoleic acid. The discrepancy between the two methods increases with the increase in the degree of unsaturation of the polyethylenic acids, being largest for sardine oil acids and extremely small for linoleic acid. For stearolic acid which has a triple bond, the Rosenmund-Kuhnhenn method gives a higher value than the Wijs method, which gives the value corresponding to the addition of one molecule of halogen. Yoshiyuki Toyama and Tomotaro Tshuchiya. *J. Soc. Chem. Ind., Japan* 38, Suppl. binding 32-5 (1935).
— ♦ —

Fresh soybean sludge is warmed and stirred with anhydrous glycerol containing sufficient dry sugar to bring the specific gravity to 1.36-1.39. The aqueous layer is then separated by centrifuging, leaving the oil and lecithin. Noblee & Thorl G.m.b.H. German Patent No. 615,791.

RAPID METHOD FOR NEUTRAL FAT IN SOAP

Dissolve 10-20 grams of soap in 100-150 cc. of 60 per cent by volume alcohol containing 0.5 per cent of sodium bicarbonate. After the soap is in solution, extract unsaponified and unsaponifiable matter in the usual way with petroleum ether. Wash the united petroleum ether extracts with 60 per cent alcohol containing 0.5 per cent of soda ash. Distil off the petroleum ether. Dissolve the residue in 5 cc. of a 1:1 mixture of alcohol and benzene and titrate with a 1/30 N solution of potassium hydroxide in the same solvent, to a phenolphthalein end-point. This neutralizes the free fatty acids present. Add 5-10 cc. of the same potassium hydroxide solution and heat under a reflux on a water bath for 15 to 20 minutes. Back-titrate excess potassium hydroxide with 1/30 N alcoholic hydrochloric acid.

If a is the number of cc. of 1/30 N potassium hydroxide solution required for saponification, and S represents the saponification number of the neutral fat, the per cent of unsaponified neutral fat is

$$a \times 56 \times 100$$

$$S \times 30 \times b$$

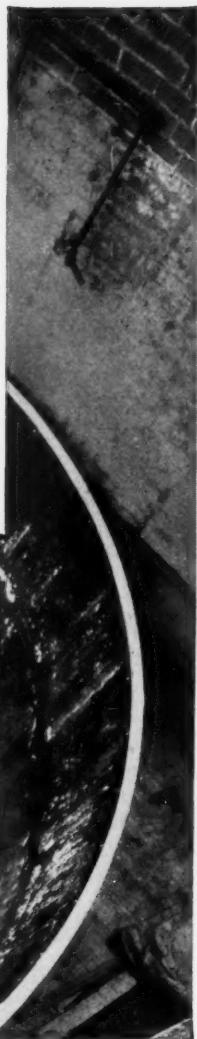
where b is the weight of soap in grams. *Seifen, Oel- und Fettind.* 21, 352 (1935).
— ♦ —

An investigation was carried out to ascertain whether the determination of the pH of aqueous solutions of soaps could be substituted for the determination of free alkali. A study of the pH of copra, arachis, olein and stearin soaps to which were added increasing amounts of free alkali led to the following conclusions: At equal concentrations the pH of aqueous solutions of soaps containing no free alkali increases with the molecular weight, and for equal molecular weights the pH increases with the melting point of the fatty acids. Determination of pH value does not give a measure of the free alkali, as the pH may remain constant or vary but slightly for appreciable variations in free alkali. The rise in pH as a function of free alkali is slower as a concentration is reached where soap has a greater tendency to be salted out by addition of alkali. Vizern and Guillot. *14th Congr. chim. ind.*, Paris, 6 pp.
— ♦ —

A new Dutch process for making sodium perborate is covered by British Patent Number 434,991. It involves the use of a small quantity of one or more of the soluble salts of the alkaline earths, magnesium or zinc. These salts bring about a reduction in the apparent specific gravity of the sodium perborate. This is of importance in the manufacture of soap powders, where a very light perborate is usually preferred. The stability of the product in aqueous solution at elevated temperatures is considerably increased over that of the usual perborate. This meets one of the difficulties of using oxidizing compounds with soap, namely their tendency toward a rapid break-down or decomposition at elevated temperatures.



*The Material
for this*
GIANT
*was no
SMALL PROBLEM*



**Boiling Kettle 16 feet in diameter and 45 feet deep
demonstrates the advantage of low cost Nickel-
Clad Steel in producing high quality product.**

This 16 foot diameter and 45 foot deep boiling kettle is the largest all Nickel-clad steel kettle in use. The pure nickel layer, inseparably bonded to the steel base, protects the toilet soap from contamination by harmful metallic impurities and offers maximum resistance to caustic soda, salt, and brines. Heating coils, discharge spouts, valves, etc. are of Pure Nickel. This kettle and others were built and erected by welding by Littleford Brothers, Cincinnati, Ohio.

YOU know that the user who installed this kettle thought hard and long about such things as first cost, long life, and effect on his product, before he chose Nickel-Clad Steel. Make the same study he did, and you will make the same choice.

This soap maker has now a kettle that resists the corrosive action of caustic and salt brines and thereby produces a high quality soap free from impurities that cause rancidity or affect costly perfumes.

These advantages are made possible at low cost with Nickel-Clad Steel

which is available in large plates having a protective layer of Nickel 10-20% of the total plate thickness. The Nickel layer is inseparably bonded to the steel base plate and withstands the fabricating operations necessary in construction. The kettle was erected in the field and joined by welding. No heat treatment of welds required to develop resistance to corrosion—such resistance is inherent in Nickel.

Heating coils, discharge spouts, sup-

ply lines, valves, etc. in such kettles are Pure Nickel or Monel Metal.

Write for any of the following bulletins:

"Nickel and Monel Metal in Soap Manufacture."

"Fabrication of Nickel-Clad Steel."

"Monel Metal and Nickel in the Manufacture of Pharmaceuticals, Fine Chemicals, and Proprietary Products."

"Caustic Alkalies vs. Nickel and Its Alloys."

THE INTERNATIONAL NICKEL COMPANY, INC.

67 WALL STREET

NEW YORK, N. Y.

Say you saw it in SOAPI

January, 1936

ON PRODUCTS AND PROCESSES

A soap base is homogenized and refined for the production of a homogeneous plastic mass from which bars or cakes may be subsequently formed. The method consists in regulating the temperature of the base to maintain a predetermined condition of plasticity and repeatedly forcing the base while at this temperature through successive sets of minute orifices of decreasing size by means of high pressure. None of the orifices should be comparably greater in size than the openings of a 20-mesh screen. Lever Brothers Co. Canadian Patent No. 354,691.

— ♦ —
A transparent soap composition for treating textiles consists of water and a relatively small amount of an alkali soap of sulfonic acid which has been derived from mineral oil. The soap is of the type which ordinarily forms turbid or opaque mixtures with warm water. An amount of highly refined emulsified spindle oil sufficient to make the composition entirely clear, is added. Shell Development Co. Canadian Patent No. 354,565.

The foaming power of soaps made from purified tall oil (tallol:—resinous fatty mixture, by-product of paper manufacture) is equal to that of pure fatty acid soaps. Soaps prepared from a mixture of hydrogenated fats and tall oil have a higher detergent power than all-fat soaps. Liquid soaps can be prepared satisfactorily exclusively from purified tall oil. In practice, 25 per cent of tall oil can be incorporated in household soaps and about 12 per cent in toilet soaps. A. Lomanovich and N. Tret'yakova. *Chimie & Industrie* 34, 643 (1935).

— ♦ —
The phenomenon of sweating in soap is due to its property of taking up moisture from the atmosphere, not to syneresis, or the squeezing out of moisture from the inside of the soap cake. Tests bearing on this were made with soaps prepared from pure lauric, myristic, palmitic, stearic and oleic acids. It was found that moisture was taken up by both anhydrous and hydrated soap, and that oleic acid soap absorbed more moisture than any of the others. M. Goswami and K. L. Basu. *Indian Soap J.* 2, 85-7 (1935).

— ♦ —
Wetting and cleansing agents consist of new esters of an aliphatic dibasic acid of the formula XOOCRCOOX where R is an aliphatic chain containing at least one SO_3H group and free from mercapto groups and X is hydrogen or an alcohol or phenol radical or the corresponding metal sulfonates. Examples are sodium or potassium dimethyl sulfomaleate and diamyl sulfosuccinate. The Selden Co. French Patent No. 776,495.

A non-settling liquid soap contains a finely divided superfatting agent. Wetting and emulsifying agents may also be present. Henkel & Cie G.m.b.H. German Patent No. 614,869. — ♦ —

A scale for the hardness of water may be represented as follows:

0- 4° of total hardness.....	Very soft
4- 8° of total hardness.....	Soft
8-12° of total hardness.....	Somewhat hard
12-18° of total hardness.....	Fairly hard
18-30° of total hardness.....	Hard
Above 30° of total hardness.....	Very hard

As an example of how the hardness of water affects its usefulness for the manufacture of soap, 1° of hardness in 1 liter (1.8 pints) of water destroys 12 grams (about $\frac{1}{2}$ ounce) of good quality curd soap; 10° of hardness in 1 liter of water destroys 1.2 kg. (about $2\frac{1}{2}$ pounds) of soap; and 20° of hardness in 1 liter of water destroys 2.4 kg. (a little over 5 pounds) of soap. *Chem.-Tech. Rundschau*, November 1935.

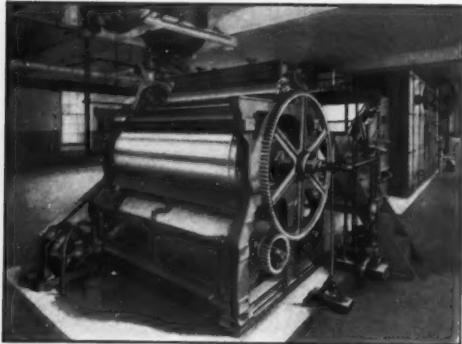
— ♦ —
Stable sulfonated compounds are obtained by sulfonating, between -5 and $+30^\circ\text{C}.$, fatty alcohols with an iodine number of at least 100, either alone or mixed with other unsaturated fatty substances and containing hydroxyl groups. Deutsche Hydrierwerke A.-G. French Patent No. 776,044.

— ♦ —
Detergents are made by submitting to cracking a paraffin hydrocarbon preferably of high molecular weight, to produce unsaturated products of more than 6 carbon atoms, preferably under conditions which will avoid appreciable polymerization. The product formed is treated with concentrated sulfuric acid and then neutralized to form a soap. Standard Oil Development Co. French Patent No. 783,319.

— ♦ —
The Hellige Comparator is particularly useful for the colorimetric determination of the pH of soap solutions. Phenol red is used for the pH range of 6.8 to 8.4 for determinations in alcoholic solution. o-Cresolphthalein covers the pH range of 8.4 to 9.8 and thymolphthalein the pH range of 9.4 to 10.6. Karl Pfaff. *Seifensieder-Ztg.* 62, 963 (1935).

— ♦ —
Acid sulfuric esters of alcohols are added to mercerizing liquors to improve their wetting properties. The alcohols may be aromatic, aliphatic-aromatic or heterocyclic, such as cyclohexanol, terpineol, borneol, menthol, furfuryl alcohol, etc. Soc. pour l'ind. chim. a. Bale. British Patent No. 431,662.

PRODUCING THE PERFECT CHIP FOR ALL SOAP MAKING NEEDS



• New Type Proctor Chip Soap System producing extremely thin chips of textile soap in new plant of Original Bradford Soap Co., River Point, R. I.

• The New Proctor Chip Soap System produces the thinnest of chips . . . chips perfectly formed in long ribbons, evenly thin from edge to edge, uniformly dried free from hard overdried particles or underdried spots. These chips make cleaner, whiter, quicker-dissolving laundry flakes. They make smooth-surfaced, clear-colored toilet cakes. They give quicker, better milling and plodding. They give quicker, easier grinding into powdered soaps . . . with less loss in dust. New high speed chilling roll . . . spray-cooled, pump-drained, precision-ground, smooth-surfaced. New drying machine . . . with revolutionary improvements in principal details of design . . . more efficient, more economical, cleaner in operation. Write for your copy of our new descriptive Bulletin No. 72.

PROCTOR & SCHWARTZ, INC.
• SEVENTH ST. & TABOR ROAD PHILADELPHIA •

Breaking into the English market

The United Kingdom and the British Empire offer profitable fields for sales expansion. Many well-known American manufacturers are concentrating on this market. If you are interested why not become a subscriber to the "Soap, Perfumery and Cosmetics Trade Review"—the only British trade paper produced exclusively for manufacturers of soaps and cosmetics.

The "S. P. C." is more than a trade paper—it provides a thorough marketing service for its subscribers. It will give you help in finding the right manufacturer to produce your goods—it will put you in touch with selling agents and advertising agents. It will collect and forward information and render other useful services entirely without charge. A year's subscription costs you only \$3.00 (or \$5.00 for 2 years). Why not send in your subscription now for two years? Send us your check or international money order.



Soap Perfumery and Cosmetics

Incorporating
The Soap Trade Review
102-5 Shoe Lane, London, E.C. 4

TRADE REVIEW

NEW PATENTS

(From Page 51)

the frictional resistance of which tends to build up a considerable pressure in the heating zone and thus further promote and accelerate the reaction; cooling the soap, after it leaves the heating zone and while it is still under pressure, sufficiently to partially solidify the soap and thus modify the frictional resistance exerted on the soap as it passes through the orifice; adding a modifier to the soap during the cooling, the soap being extruded in the form of a partially solidified continuous strip from the discharge orifice; and cutting the strip to form bar soap.

No. 2,019,776, Apparatus for Producing Soap. Patented November 5, 1935 by Benjamin Clayton, Sugarland, Texas, and Ralph Everett Burns, Los Angeles, Calif., assignors to Refining, Inc., Reno, Nev. An apparatus for producing soap, comprising: a heater for raising the temperature of a mixture of saponifiable fat and saponifying alkali by heat transmitted through the walls thereof; pumping means for supplying the mixture to the heater by applying sufficient pressure thereto to cause the mixture to flow into the heater against any pressure that may be built up therein; a cooler for reducing the temperature of the soap produced in the heater so that the soap is solidified by removing heat from the soap through the walls of the cooler; and a member having an orifice through which the soap is ejected after it leaves the cooler, the orifice being so proportioned as to insure the building up of considerable pressure in the cooler by exerting frictional resistance on the solidified soap.

No. 2,020,755, Soap Frame Stripper. Patented November 12, 1935 by John Woesner, Cincinnati, Ohio, assignor to The Cincinnati Soap Company, Cincinnati, Ohio. A soap frame stripper comprising an elevated support, hoisting means associated with the support and adapted to engage and raise the frame encasing a block of framed soap positioned under the support, the hoisting means comprising a pair of shafts mounted on the support, a pair of sprocket wheels mounted on each shaft, means for driving the shafts, and a sprocket chain carried by each wheel and adapted to engage the soap frame and to be raised and lowered by operation of the driving means, and means associated with the support for precluding hoisting of the block of soap along with the soap frame.

No. 2,022,139, Disinfecting. Patented November 26, 1935 by Georg Meder, Munster on Taunus, and Erich Eggert, Frankfort-on-the-Main, Germany, assignors to I. G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, Germany. Disinfecting and preserving agents comprising an additional compound of formic acid with an alkali metal salt of formic acid.

No. 2,022,246, Spray Composition. Patented November 26, 1935 by Frank Floyd Lindstaedt, Oakland, Calif., assignor to Hercules Glue Company, Ltd., San Francisco, Calif. A spraying composition including a low viscosity oil as an effective spray agent and a carrier agent for

the oil increasing the deposit of the oil per unit area sprayed to about 1.75 milligrams of oil per square inch of area sprayed, the carrier agent being substantially ineffective in the oil as an insecticide.

No. 2,022,262, Stain Removal. Patented November 26, 1935 by James F. White, Niagara Falls, N. Y., assignor to The Mathieson Alkali Works, Inc., New York, N. Y. A stain removing process which comprises subjecting the stain to treatment with an aqueous solution comprising a chlorite from the group consisting of alkali-metal chlorites and alkaline-earth-metal chlorites, and a substance from the group consisting of oxalic acid and water-soluble oxalates.

No. 2,022,493, Processes of Preparing Glycerides. Patented November 26, 1935 by Carl W. Christensen, Chicago, Ill., assignor to Armour & Company, Chicago, Ill., a corporation of Ill. In the process of preparing fatty esters of the class of mono and diglycerides the step which comprises heating, at a temperature of about 100° C. to 200° C., a mixture of a higher fatty acid and a glycerate of an alkali-forming metal, the glycerate having at least one free hydroxyl hydrogen.

NEW FAT-SPLITTING PROCESS

A rapid method for fat splitting for use in the soap industry has been patented by Dr. Earl K. Wallace, head of the chemistry department at Pennsylvania College for Women, Woodland Road, Pittsburgh, Pa. The new process is stated to reduce the time for soap manufacture from thirty hours to three hours, and also materially to simplify the refining of the glycerine. The fatty acids are also obtained direct in a purer form, and can be readily separated because the solvent, an organic ketone, in which they are found on hydrolysis.

Compounds with wetting properties for use in the textile industries are made by introducing at least one free carboxyl group into an amine containing a chain of at least 6 carbon atoms and 2 amino groups. An example is a product obtained by heating equimolecular proportions of copra oil and triethylene-tetramine and gradually introducing monochloracetic acid. I. G. Farbenind. A.-G. French Patent No. 783,255.

Nickel formate was dried at various temperatures between 100 and 150° C., and used in the hydrogenation of oils. The products dried at higher temperatures contain more reduced nickel and give fat mixtures with lower melting points. The best results were obtained with nickel formate dried at 100° C. in a steam-heated dried. I. Petryev. *Masloboino Zhirovoe Delo* 11, 221-2 (1935).

In refining fats and oils the color can be improved by adding 8 to 10 per cent of soap stock to the fat. A. Strel'tzov. *Masloboino Zhirovoe Delo* 1935, 151.



Insecticides

containing **YARMOR 302**

are used in termite-proofing formulae, in bed-bug

sprays, in the control of insects attacking rustic

furniture, and in the dormant control of codling

moths. ☆ We supply Yarmor 302 Steam-distilled

Pine Oil to manufacturers of insecticides.

HERCULES NAVAL STORES

HERCULES POWDER COMPANY

INCORPORATED

961 Market Street, Wilmington, Delaware



Return the coupon for further information



BRANCH OFFICES

Chicago
New York
Philadelphia
St. Louis
Salt Lake City
San Francisco

Hercules Powder Company, 961 Market Street, Wilmington, Delaware

Please send information about the value of Yarmor 302
in insecticides.

Name _____

Company _____

Street _____

City _____

State _____

OO-53

SANITARY PRODUCTS

A Section of "SOAP" Dealing with

INSECTICIDES • DISINFECTANTS • EXTERMINATING
FLOOR PRODUCTS • SANITARY SUPPLIES • MOTH PRODUCTS

POWCO
BRAND
REG. U.S. PAT. OFF.

SPECIALISTS

ONE entire manufacturing plant for the production of Pyrethrum and Rotenone products.

ONE chemical and biological Laboratory exclusively for Pyrethrum and Rotenone research and standardization.

ONE organization of trained men who are experienced technicians in all phases of Pyrethrum and Rotenone problems including field research work.

ONE standardized line of Pyrethrum and Rotenone products in whole, powdered and extract form, all of the highest killing power value.

ONLY four of the many reasons you should buy from

JOHN POWELL & CO., INC.

Specialists in Pyrethrum and Rotenone Products

114 E. 32nd St., New York, N. Y.

"KILLING POWER THAT'S THE THING"!

Flea Facts

TECHNICALLY, fleas are classed as hard-bodied insects, which means that nature has provided them with a hard protective shell, thereby creating a little problem for the insecticide manufacturer as well as for the dog harboring the fleas.

Notwithstanding their shell, fleas can be killed by stepping on them, but this is difficult and offers no profit to anyone. A much better method, more profitable and far less toilsome, is to make a flea powder based on Prentox Powdered Derris Resins, which have been oil treated to make them more immediately and completely toxic to the fleas and to lengthen the period of residual protection to the animal.

*Prentox Flea Soap Concentrate is ideal for
making stable and effective liquid flea soaps.*

R. J. Prentiss & Co., Inc.

100 Gold Street

New York, N. Y.

GO..NATIONAL



..along the
buyways
of trade!

MOVE up front where quick sales are in the making and the *finer* package WINS.

"NATIONAL" Containers drive ahead to SALES, setting new standards of style and display value.

"NATIONAL" Service swings into action at the signal!

The Open Road's Ahead.

GO "NATIONAL"

NATIONAL CAN COMPANY • Inc.

FOR OVER A QUARTER CENTURY KNOWN AS METAL PACKAGE CORPORATION
EXECUTIVE OFFICES • 110 EAST 42nd STREET • NEW YORK

One of America's Largest Canmakers

SALES OFFICES AND PLANTS • NEW YORK CITY • BALTIMORE • BROOKLYN • CHICAGO • BOSTON • DETROIT • NEW ORLEANS
FISCHER CAN COMPANY DIVISION • HAMILTON • OHIO
BALTIMORE PLANT AND SALES OFFICE • 811 SOUTH WOLFE STREET

OUR POSITION ON PYRETHRUM ASSAY METHODS...

There is a great deal of confusion in the trade about assay methods. We have attempted to make our position clear in the letter on the right. It answers the inquiry below which was received from one of the largest manufacturers of household and livestock pyrethrum sprays.

Dec. 19 1935

Mr. C. B. Gnadinger,
McLaughlin, Cormley, King & Co.
Minneapolis, Minn.

Dear Sir:

You will recall we have dealt with you at considerable length in past years upon the standardization of our apparatus and technique for the copper reduction method of assay for Pyrethrins.

We were quite interested in your article in SOAP for September 1934 showing an average difference of 9.4% Pyrethrins (higher) by the Seil Method as compared with results by your method. This figure checks in general with our results.

However, other laboratories give us results by both methods that are substantial checks and maintain that both assays should give the same results. Incidentally, all other laboratories with whom we have dealt obtain, not only results by both methods which are in agreement, but substantially higher results than we secure.

We have noted with considerable interest the advertisement of your company in SOAP for October, 1935, pages 76-77, in which nine different assays for Pyrethrins are given in terms of the Seil Method. It naturally occurred to us that you have some modification of Seil's procedure which now checks your own copper reduction method. We shall be pleased to learn your present feeling as to reliability of the Seil Method as a measure of Pyrethrin content.

We were quite gratified to find that our assays of the two cars of flowers received from your company to date this year were very close to the figures claimed.

Thanking you for any information you can give us at this time as to reliability of the Seil Method of assay and as to how it checks with your own copper reduction procedure, I am

Yours truly,

Dec. 20 1935

Dear Sir:

We acknowledge your letter of December 19th in regard to the different methods of assaying pyrethrum products. The analyses of these materials fall into two classes:

The analysis of pyrethrum flowers

In regard to flowers, we have made a large number of analyses since we published our results in 1934, and we have invariably found that the Seil method gives a higher percentage of pyrethrins than our copper reduction method.

This conclusion has been, to some extent, confirmed by Heller & Acree of the U.S. Department of Agriculture, (J. Industrial & Engineering Chemistry, Analytical Edition, Vol. 7, No. 5, 1935). I enclose a photocopy of their paper, which you may have seen. You will note that they found that the pyrethrin II content determined by the Seil method was approximately 30% higher than the content found by their methoxyl method. We have found that the content found by their copper reduction method is about 15% higher by the Seil method than by the total pyrethrin content. Since pyrethrin II is approximately half of the total pyrethrin content, Heller & Acree's analyses substantiate our findings.

We have made a number of attempts to modify the Seil method so that it would agree with the copper reduction method. We have been able to obtain somewhat lower results by modifying the Seil method, but we have never been able to bring the two methods into agreement.

Some light on the cause for the higher results by the Seil method was obtained in a series of experiments which we conducted on a highly concentrated pyrethrum extract. This extract contained approximately 15% pyrethrins, and was made with decalin, by extracting the flowers with ethylene dichloride, evaporating the solvent, and extracting the resulting oleo resin with decalin and hexane. This solution was then chilled and filtered and the hexane was evaporated, leaving a decalin solution of pyrethrins which can be assayed by either the copper reduction method or the Seil method. This extract was made in our extraction plant on a commercial scale. In fact, we have a patent pending on this process. The flowers from which the extract was made were assayed by Seil's method and the copper reduction method, and showed,

Analysis of the decalin extract showed,
Total Pyrethrins Seil method, 1.05%
Total pyrethrins Copper method, 0.90%

Total pyrethrins Seil method, 14.4 %
Total pyrethrins Copper method, 14.2 %
This indicated that the material which interferes with the Seil method was removed in our manufacturing process, either during the vacuum distillation, which is a part of the process, or by precipitation, which is a part of batches with the same relative result in each case, although the flowers were from nine different lots. We also found that an extract made by our regular process for manufacturing Pyrocide 20 contained the amount of pyrethrins which would be expected from the analysis of the flowers by the copper reduction method; the analysis of the Pyrocide 20 was made by the Seil method. It is impossible to apply the copper reduction method to kerosene extracts (Pyrocide 20) containing about 2% pyrethrins, but it is possible to assay kerosene extracts containing about 15% pyrethrins by the copper reduction method. This is because the amount taken for analysis in the latter case is 1 gram or less, and this amount of kerosene does not interfere in the method. We enclose a reprint describing this assay method. (Soap, Vol. 11, No. 10, Page 95, 1935).

On the other hand, pyrethrum extracts which are not made by the process that we use, may or may not contain the material which interferes with the Seil method, depending on the type of process used in making these extracts. Our conclusion then in regard to the Seil method is that it gives high results when applied to pyrethrum flowers. This is confirmed by Heller and Acree. It may or may not give high results on concentrated extracts of pyrethrum, depending on the process by which these extracts are made.

If there are any points which we have not covered or made clear, we shall be glad to hear from you further.

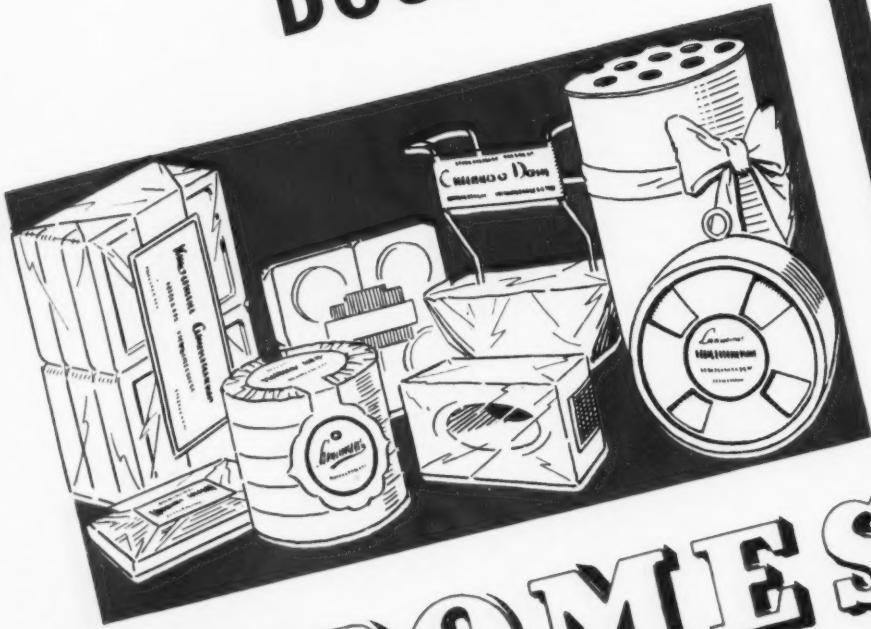
Yours very truly,
MC LAUGHLIN GORMLEY KING COMPANY

C B Gnadinger
J

MC LAUGHLIN GORMLEY
KING COMPANY
MINNEAPOLIS

DOUBLE

SALES APPEAL WITH DOUBLE ACTION!



COLOROMES

Impart fragrance and color to Para or Napthalene Blocks and Crystals in one simple operation!

Fragrance and color so substantially improve consumer appeal of all types of products made from Para or Napthalene Blocks and Crystals that no manufacturer should ignore these important factors.

COLOROMES have been developed by the Felton Chemical Company laboratories with these features in mind.

IT WILL PAY YOU TO WRITE IMMEDIATELY FOR WORKING SAMPLES AND PRICE LIST!
FELTON CHEMICAL COMPANY
INCORPORATED

603 JOHNSON AVENUE, BROOKLYN, N. Y.
Manufacturers of AROMATIC CHEMICALS, NATURAL ISOLATES, PERFUME OILS, ARTIFICIAL FLOWER AND FLAVOR OILS
Executive Offices and Factory: 603 JOHNSON AVE., BROOKLYN, N. Y.
Boston, Mass. Philadelphia, Pa. Sandusky, Ohio Chicago, Ill. St. Louis, Mo. New Orleans, La. Los Angeles, Calif.
20 Boylston St. 200 So. 12th St. 1408 W. Market St. 1200 N. Ashland Ave. 245 Union Blvd. Balter Bldg. 515 So. Fairfax Ave.

GENERAL CHEMICAL COMPANY HEAVY CHEMICALS

TRISODIUM PHOSPHATE

SODIUM SILICATE SODIUM FLUORIDE
SALT CAKE NITRE CAKE
GLAUBER'S SALT SULPHURIC ACID

And Other Heavy Chemicals of Standard Purity

PRODUCTS of standard quality and uniformity packed for safety in transit, stocked at strategic points and shipped to reach you at the lowest transportation cost —are these not reasons for decided preference? Your inquiry, by 'phone, wire or mail, will receive prompt and intelligent attention at the Company office nearest you.

GENERAL CHEMICAL COMPANY
Home Office: 40 Rector Street, New York, N. Y.
Cable Address: LYCURGUS, N. Y.

Sales Offices: Atlanta, Baltimore, Boston, Buffalo, Charlotte, Chicago, Cleveland, Denver, Kansas City, Los Angeles, Minneapolis, Philadelphia, Pittsburgh, Providence, San Francisco, St. Louis, Seattle

In Canada: The Nichols Chemical Company, Limited, Montreal, Toronto



Also BAKER & ADAMSON C. P. Acids, Laboratory Reagents and Fine Chemicals

LETHANE 384

Insecticides made from this synthetic concentrate are:

*Extremely
rapid in action.*

High in killing power.

Stable and uniform.

Economical.

Improve the quality of your product by using
Lethane 384.



LETHANE 384 can be depended upon to furnish the effective ingredient in the following:

Fly Sprays

Moth Sprays

Bedbug Sprays

Roach Sprays



Cattle Sprays

Mill Sprays

**Mosquito
Sprays**

Effective • Fast • Stable • Uniform • Economical

RÖHM & HAAS COMPANY • INC.

222 WEST WASHINGTON SQUARE • PHILADELPHIA • PENNA.

Uniformity

assured by constant tests in the
most complete laboratories in
the insecticide industry

The finest milled Pyrethrum and Derris Powders in the world are produced by McCormick & Company. These powders are standardized analytically and biologically in the McCormick Laboratories and, because of their extreme fineness, contain more killing particles per ounce. McCormick & Company also produces Pyrethrum and Derris Powders which are stabilized to prolong their toxicity when exposed to light and air. Our recommendations for the use of these powders are based upon actual field performance. Write for information. McCormick & Co., Inc., Baltimore, Md.

McCormick's PYRETHRUM AND DERRIS POWDERS

Here you see, in operation, the Tyler Ro-Tap Testing Sieve Shaker in the McCormick Laboratories. This device tests, with mathematical accuracy, the fineness of the grind of each mill run of McCormick's Pyrethrum and Derris Powders.

McCormick's

STANDARDIZED PYRETHRUM AND DERRIS PRODUCTS

PYRETHROL 20 • PYRETHRUM POWDER • DERRIS POWDER
DERRIS EXTRACT • DERRIS RESINATE • ROTENONE CRYSTALS

LETHANE 384

Insecticides made from this synthetic concentrate are:

*Extremely
rapid in action.*

High in killing power.

Stable and uniform.

Economical.

Improve the quality of your product by using
Lethane 384.



LETHANE 384 can be depended upon to furnish the effective ingredient in the following:

Fly Sprays

Moth Sprays

Bedbug Sprays

Roach Sprays



Synthetic Insecticide Concentrate

Cattle Sprays

Mill Sprays

Mosquito

Sprays

Effective • Fast • Stable • Uniform • Economical

RÖHM & HAAS COMPANY • INC.

222 WEST WASHINGTON SQUARE • PHILADELPHIA • PENNA.

Uniformity

assured by constant tests in the
most complete laboratories in
the insecticide industry

The finest milled Pyrethrum and Derris Powders in the world are produced by McCormick & Company. These powders are standardized analytically and biologically in the McCormick Laboratories and, because of their extreme fineness, contain more killing particles per ounce. McCormick & Company also produces Pyrethrum and Derris Powders which are stabilized to prolong their toxicity when exposed to light and air. Our recommendations for the use of these powders are based upon actual field performance. Write for information. McCormick & Co., Inc., Baltimore, Md.

McCormick's PYRETHRUM AND DERRIS POWDERS

Here you see, in operation, the Tyler Ro-Tap Testing Sieve Shaker in the McCormick Laboratories. This device tests, with mathematical accuracy, the fineness of the grind of each mill run of McCormick's Pyrethrum and Derris Powders.

McCormick's

STANDARDIZED PYRETHRUM
AND DERRIS PRODUCTS

PYRETHROL 20 • PYRETHRUM POWDER • DERRIS POWDER
DERRIS EXTRACT • DERRIS RESINATE • ROTENONE CRYSTALS

Back off!

DEO 

Reg. U. S.

BEFORE 1931, you used kerosenes for the manufacture of your liquid insecticides. You had no other choice. In 1936, the consumer demand is for insecticides free from kerosene odor.

With the introduction of DEO-BASE to the Insecticide Industry in 1931, L. Sonneborn Sons, Inc. pioneered the adoption of petroleum distillates refined to complete freedom from kerosene odor. There was a half century of petroleum refining experience in back of DEO-BASE then.

Now, with an even greater understanding of the Insecticide Industry's problems, we know that

The undisputed leadership of DEO-BASE, firmly establi

L. SONNEBORN
Refiners of White Oils

Refineries:
Petrolia, Pa. and
Franklin, Pa.

New York
88 Lexington Avenue

BASE

Pat. Off.

NO OTHER LIQUID INSECTICIDE BASE GIVES YOU ALL THE FEATURES FOUND IN DEO-BASE

These include:—

1. STABILITY
2. BALANCED FRACTIONATION
3. CORRECT EVAPORATION RATE
4. A FLASH POINT WHICH MEETS *ALI* SAFETY REQUIREMENTS
5. CONTROLLED UNIFORMITY
6. COMPLETE FREEDOM FROM KEROSENE ODOR

No matter whether your customers want to kill mosquitoes in Alaska or flies in Florida, you will find DEO-BASE the one product which will meet *all* your requirements, *always*.

shed in 1931, will be maintained in 1936 and beyond.

SONS, Inc.
and Petrolatums

Los Angeles
215 West 5th Street

Chicago
400 West Madison Street





GOOD odor is firmly entrenched as one of the most powerful selling forces in the fly spray industry.

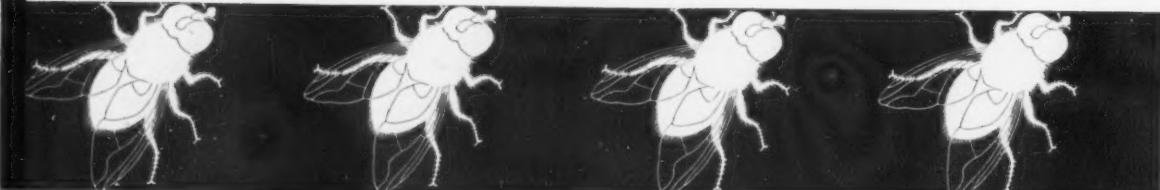
Quality isn't enough. It's the added touches that count . . . and odor is one of the most important of those added touches.

But remember, any old scent simply will not do. You need the advice and co-operation of experienced men in the deodorant and reodorant field.

Givaudan-Delawanna has been producing odors for fly sprays from the very first. We have grown up with the trend . . . and have developed specific odors for specific products on the basis of careful study and research.

There's a Givaudan odor for every type of fly spray, disinfectant and insecticide. Let our experience be your guide in selecting the right one for your product.

G I V A U D A N
D E L A W A N N A I N C .
8 0 F I F T H A V E N U E , N E W Y O R K , N . Y .
Branches: Philadelphia Los Angeles Atlanta Cincinnati Detroit Dallas
Baltimore New Orleans Chicago San Francisco Seattle Montreal Havana



PYREFUME

SUPER 20

CONTAINS 2 GRAMS PYRETHRINS PER 100 C.C.

PYREFUME

SUPER 30

CONTAINS 3 GRAMS PYRETHRINS PER 100 C.C.

by the SEIL modification of the world-accepted
TATTERSFIELD test

The PERFECTED PYRETHRUM CONCENTRATE

THESE products are not only physiologically tested in our PEET-GRADY chamber to confirm the killing power, but are also stabilized against inherent deterioration by the unique PENICK method.

PENICK PRODUCTS ARE QUALITY PRODUCTS!

In addition to being manufacturers of Pyrefume, we are the largest botanical drug firm in the world. Our vast physical resources and modern laboratories help us keep abreast of latest developments in all phases of the industry, and as a result, Penick products are universally accepted the world over as products of unquestioned quality.

*Call
On Us*

FOR TECHNICAL DATA ON
DERRIS ROOT, CUBE ROOT and
ROTELONE, which are now widely
used—and also RED SQUILLS, Na-
ture's destructive agent for rats.

S.B. PENICK
& COMPANY
NEW YORK·CHICAGO

**Specialists in doing
one thing well**



Reg. U. S. Patent Office

**For over a quarter
century manufacturers of**

**TESTED and CERTIFIED
COAL TAR and PINE OIL**

DISINFECTANTS

for the wholesale trade



BAIRD & McGUIRE, Inc.
HOLBROOK, MASS. **ST. LOUIS, MO.**

New York City and New Jersey Representatives:

EASTERN STATES SUPPLY CO., 127 Troutman Street, Brooklyn, N. Y.

Phone: EVERgreen 8-2498



SANITARY PRODUCTS



A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

The Editorial View

BEFORE the end of 1936, we believe that something much closer to complete specifications and testing methods for all sanitary products, disinfectants, and insecticides than we now have, is likely to be a reality. That such complete specifications, over and above those which now exist, should be established and correlated as standards for the entire industry, was the consensus of opinion at the recent annual meeting of the National Association of Insecticide & Disinfectant Manufacturers in New York. Already the machinery of the Association is in motion to undertake this job during the current year. The establishment of complete and practical specifications and tests is the first step to eliminate the chiseler who sells fly spray with a ten per cent kill, disinfectant testing a fifth or a tenth of what it is marked, light-weight para blocks, water wax containing four or five per cent solids and that mostly paraffin, twenty per cent liquid soap containing ten per cent soap solids, and the like. It is a step to protect the honest manufacturer and the buyer. The Association could do nothing more genuinely constructive this year, or any other year. And if it is followed up by the proper education of the buyer, it will be a job worth while and well done.

FROM a progressive manufacturer of insecticides who is quite obviously a step or so ahead of the parade, have come some words of wisdom which we feel are worth repeating and commenting upon. He says: "The consumer of an insecticide is not so much interested in the cost of the item as she is in the fact that she has an insect infestation which she is desirous of

eliminating. The real question in her mind is—"Will the product do the work?" The price is of secondary importance. And after all, if insecticide manufacturers want to place all the emphasis on a price this year, let them remember that the American public is prone to judge quality by price."

Behind this statement is the advice to manufacturers that they not make any further reductions in insecticides for the 1936 season,—a message that we are only too glad to pass on and urge upon the industry. Further cuts in price will probably not sell any more insecticide,—they will not help to increase sales, and they will cut the heart out of any profit that there may be in the business this year.

A WIDELY advertised antiseptic is now featuring its own "one-cent sale"—that is two bottles in a special package for the price of one plus one cent. Now if any well-known product can afford to cut its price practically in half even for a special deal or for advertising purposes, so-called, is it any wonder that more and more people,—especially the writers of these "all-revealing" books and magazine articles,—hold the view that most proprietary products are literally fakes? Too many people already have the idea that proprietary items represent only a few cents worth of materials surrounded by much ballyhoo. In our opinion, stunts like this "one-cent sale" put on by the manufacturer help quite considerably to confirm these ideas in the minds of such consumers. Why fight these muckraking authors with one hand and give them ammunition to use against you with the other?

Committees for 1936

Appointed by W. B. Eddy, President,
National Assn. of Insecticide & Disinfectant Manufacturers

Legislative Committee

Chairman : — John H. Wright, New York.
C. L. Fardwell, McCormick & Co.
Dr. Robert C. White, Robert C. White Co.
J. R. Oppenheimer, West Disinfecting Co.
Dr. Emil Klarmann, Lehn & Fink, Inc.

Disinfectant Committee—General

Chairman : — H. Marshall Clark, Dr. Hess & Clark, Inc.
H. W. Cole, Baird & McGuire, Inc.
Melvin Fuld, Fuld Bros., Inc.
S. H. Bell, S. H. Bell Co.
W. A. Hadfield, General Laboratories, Inc.
L. B. Schwarcz, Clifton Chemical Co.

Disinfectant Specifications and Standardization

Chairman : — J. L. Brenn, Huntington Laboratories, Inc.
Jack Varley, Baird & McGuire, Inc.
Frederick Hoyt, Frederick Disinfectant Co.
B. H. Little, Hercules Powder Co.
W. A. Hadfield, General Laboratories, Inc.
J. H. Carpenter, Koppers Products Co.

Methods of Testing Disinfectants

Chairman : — B. G. Philbrick, Skinner & Sherman, Inc.
Dr. Emil Klarmann, Lehn & Fink, Inc.
Dr. Geo. F. Reddish, Lambert Pharmacal Co.
Dr. H. D. Pease, Pease Laboratories, Inc.
John H. Wright, New York City.

Literature and Patents Committee

Chairman : — Dr. Emil Klarmann, Lehn & Fink, Inc.
O. M. Poole, Derris, Inc.
Friar Thompson, Jr., Hercules Powder Co.
Harold Noble, S. B. Penick & Co.
Dr. Erich Meyer, L. Sonneborn Sons.

Antiseptic Committee

Chairman : — Dr. Geo. F. Reddish, Lambert Pharmacal Co.
Dr. Emil Klarmann, Lehn & Fink, Inc.
Dr. C. L. Black, Vick Chemical Co.
Dr. B. G. Philbrick, Skinner & Sherman, Inc.
John H. Wright, New York City.

Sanitary Specialties Committee

Chairman : — Melvin Fuld, Fuld Bros., Inc.
Russell Young, Davies-Young Soap Co.
Henry A. Nelson, Chemical Supply Co.
F. J. Pollnow, Vestal Chemical Co.
J. L. Brenn, Huntington Laboratories, Inc.
C. L. Weirich, C. B. Dolge Co.

Membership Committee

Chairman : — Russell Young, Davies-Young Soap Co.
Eastern Vice Chairman : — John Powell, John Powell & Co.
Mid-west Vice Chairman : — James Varley, Baird & McGuire, Inc.
Southern Vice Chairman : — Simon Selig, The Selig Co.
Western Vice Chairman : — Frederick Sykes, Union Oil Co.

Insecticide Committee—General

Chairman : — W. G. Griesemer, Black Flag Co.
Vice Chairman : — H. A. Thomas, Shell Petroleum Corp.
Frederick Sykes, Union Oil Co. of California.
Charles Opitz, John Opitz, Inc.
G. A. Altenbernd, Wizard, Inc.

Insecticide Specifications and Standardization

Chairman : — Dr. Robert C. White, Robert C. White Co.
E. A. Murray, Edgar A. Murray Co.
Wm. J. Zick, Stanco, Incorporated.
Wm. Bohlen, Sinclair Refining Co.
Wm. J. Wagner, The Tanglefoot Co.

Methods of Testing Insecticides

Chairman : — Dr. Alfred Weed, John Powell & Co.
C. M. Gwin, Baldwin Laboratories, Inc.
Hugh R. Berry, Shell Petroleum Co.
J. Albert Talbot, Black Flag Co.
A. E. Badertscher, McCormick & Co.
Dr. W. A. Simanton, Gulf Research & Development Corp.
F. C. Nelson, Stanco, Inc.
Jos. E. Armstrong, Rex Research Co.
Geo. A. McLaughlin, McLaughlin, Gormley, King Co.

Special Publicity Committee

General Chairman : — Ira P. MacNair, MacNair-Dorland Co.
H. W. Baldwin, Baldwin Laboratories, Inc.
W. J. Zick, Stanco, Inc.
C. P. McCormick, McCormick & Co.
Dr. Geo. F. Reddish, Lambert Pharmacal Co.
Charles Auerbach, West Disinfecting Co.
C. L. Weirich, The C. B. Dolge Co.
Peter Dougan, Merck & Co., Inc.

Convention Committee

Chairman : — John H. Wright, New York City.
Arrangements : — John Powell, John Powell & Co.
Program : — H. W. Hamilton, White Tar Co.
Entertainment : — A. L. van Ameringen, van Ameringen-Haebler, Inc.
Publicity : — Ira P. MacNair, MacNair-Dorland Co.

Special Committee on Pacific Coast Insecticide Association

Chairman : — Wm. J. Zick, Stanco, Inc.
John Powell, John Powell & Co.
Frederick Sykes, Union Oil Co. of Calif.

Debate Insecticide Specification

At 22nd Annual Meeting of Insecticide and Disinfectant Manufacturers at Waldorf-Astoria, New York—Dr. White Presents Buyer Specification—To Be Considered by New Specifications Committee—W. B. Eddy of Rochester Germicide New President—Cole, Nelson, and Young New Members of Governors—Many Speakers Heard.

SPECIFICATIONS for insecticides were debated from every angle in a sharp open floor discussion at the annual meeting of the National Association of Insecticide and Disinfectant Manufacturers, held last month at the Hotel Waldorf-Astoria, New York. Dr. Robert C. White, Robert C. White Co., who was empowered at a recent meeting of the Board of Governors to proceed with the development of a specification for liquid household insecticide, presented to the membership for their consideration a brief and simple specification, the complete text of which appears elsewhere in this issue.

Dr. White declared that prospective buyers are not so much interested in technical details concerned with method of testing, materials used, etc., as they are in securing a purchasing specification under which they can feel sure of getting a spray which will be effective, safe, pleasant and economical. The discussion of this subject which started at the first morning session of the convention continued through the afternoon session, when Dr. Stroud Jordan, deputy commissioner of the Bureau of Standards of the Department of Purchases, City of New York, was in attendance at the meeting to discuss with members of the association the proposed specifications which the City of New York is considering adopting.

The city specification, which is still in tentative form, was submitted by Dr. Jordan, and in the open discussion which followed many critical comments were made upon it. The specification is based upon determination of the pyrethrin content by chemical test, and several members of the association rose to point out deficiencies in this method of testing. The advantages of the Peet-Grady biological test were enumerated to Dr. Stroud who indicated that he did not have full confidence in this method of testing either, and further the city had to have a test that could be employed without delay and without too great expense.

Clarence L. Weirich, C. B. Dolge Co., Westport, Conn., made an important contribution to the discussion in pointing out the need of keeping the specification as simple and basic as possible. He called attention to the fact that whatever is adopted by New York City often serves as a model for other municipalities, who then may not change their specification for years. Accordingly, Mr. Weirich said it is important that nothing be included in the speci-

fication which is apt to become outdated in a short time. He suggested that the city's specification prescribe a method of testing approved by the National Association, leaving the changing details for decision by the association as new testing procedures are developed.

In the absence of the retiring president, Charles P. McCormick, McCormick & Co., Baltimore, who was confined to his home by illness, the direction of the sessions was in the charge of 1st vice-president William B. Eddy, Rochester Germicide Co., Rochester, who was subsequently elevated to the presidency of the association for the coming year. Other officers chosen were: W. G. Griesemer, Black Flag Co., Baltimore, 1st vice-president; H. M. Clark, Dr. Hess & Clark, Ashland, Ohio, 2nd vice-president; John Powell, John Powell & Co., New York, treasurer; John H. Wright, secretary. Four new members of the board of governors were named: C. P. McCormick, McCormick & Co.; Russell H. Young, Davies-Young Soap Co., Dayton, Ohio; Harry W. Cole, Baird & McGuire, Inc., Holbrook, Mass.; and Henry A. Nelson, Chemical Supply Co., Cleveland.

At the meeting of the board which preceded the opening of the convention the following firms were elected to membership in the association: J. R. Watkins Co., Winona, Minn.; Daugherty Mfg. Co., Jersey City, N. J.; Acme-line, Inc., Traverse City, Mich., associate member; and Aromatic Products Co., New York, associate member.

It was decided tentatively at the board meeting that the mid-year meeting would be held again at the Edgewater Beach Hotel, Chicago, during the second week in June, 1936. The board also went on record as being in favor of closer cooperation with the Pacific Coast Insecticide Association, and suggested appointment of a committee to work out a plan.

A committee will also be appointed to carry on the work started by Dr. White in the direction of adopting a uniform insecticide specification for the industry. The membership of this committee will be announced shortly by the new president of the association, William B. Eddy.

Another paper delivered at the meeting which attracted much interest was presented by Jack Varley, Baird & McGuire, Inc., of St. Louis. The purpose of Mr. Varley's work was to determine the accuracy of the phenol coefficient as a practical measure of the germ-killing power of a disinfectant. A test was worked out by which disinfectants were tested under actual conditions of use against both the weaker and the most resistant type of organisms. Mr. Varley reported that while the more resistant germs held out a little longer against the disinfecting action in some cases, for all practical purposes this delay of a few minutes in securing complete kill is unimportant, since in actual use a disinfectant will remain in contact with the surface being treated for a number of hours.

(Turn to Page 119)

New Officers and National INSECTICIDE AND



W. B. Eddy
Rochester Germicide Company
President



John Powell
John Powell & Co
Treasurer



John H. Wright
Secretary



S. S. Selig
The Selig Company
Member Board



H. W. Hamilton
White Tar Co
Member Board



W. J. Zick
Stanco, Incorporated
Member Board



J. L. Brenn
Huntington Laboratories
Member Board



nd
al
ND

Board of Governors Association of DISINFECTANT MANUFACTURERS

1936



W. G. Griesemer
Block Flag Co.
1st Vice-President



Dr. Robert C. White
Robt. C. White Co.
Member Board



C. P. McCormick
McCormick & Co.
Member Board



H. M. Clark
Dr. Hess & Clark, Inc.
2nd Vice-President



H. W. Cole
Member Board
Baird & McCure, Inc.



H. A. Nelson
Chemical Supply Co.
Member Board



Wallace Thomas
Gulf Refining Co.
Member Board



R. H. Young
Davies-Young Soap Co.
Member Board



What's Ahead in Insecticides?

By CHARLES P. McCORMICK*

President, McCormick & Company

MAY I call your attention to the fact that this title is punctuated with a question mark. Not being a prophet or the son of a prophet, I am unable to foretell the future of the industry, but if I had to give a definite answer to this question, I would tell the following story.

"I had twelve bottles of whiskey in my cellar. My wife told me to empty the contents of each and every bottle down the sink—or else," so I said I would and proceeded with the unpleasant task.

"I withdrew the cork from the first bottle and poured the contents down the sink, with the exception of one glass—which I drank. I extracted the cork from the second bottle and did likewise, with the exception of one glass—which I drank. I then withdrew the cork from the third bottle and emptied the good old booze down the sink, except a glass—which I drank. I pulled the cork from the fourth sink and poured the bottle down the glass—which I drank.

"I pulled the bottle from the cork of the next and drank one sink out of it and poured the rest down the glass. I pulled the sink out of the next glass and poured the cork down the bottle. I pulled the next cork out of my throat and poured the sink down the bottle and drank the glass. Then I corked the sink with the glass, bottled the drank, and drank the pour.

"When I had everything emptied, I steadied the house with one hand, counted the bottles and corks and glasses with the other, which were twenty-nine. To be sure, I counted them again, when they came by, and I had twenty-four. And as the house came by, I counted them again, and finally I had the houses and bottles and corks and glasses counted, except one house and one bottle, which I drank."

Seriously, looking over the progress of this Association, one paramount feature stands out—that being the general improvement in the quality of products manufactured, as well as the earnest endeavor on the part of legitimate manufacturers to present their products to the consuming trade in their true light.

After all it is the opinion of the ultimate user as to the satisfaction received, that determines whether or not a brand will be specified on repeat orders. Therefore, if every manufacturer of insecticides or so-called insecticides would keep in mind the purpose for which they are intended the killing of insects—the industry as a whole would be more highly respected than it is today by the consuming public.

Unfortunately, chiselers who think more of the dollar than they do of establishing a product and a good name, get into the business and market inferior merchandise, which the unsuspecting public purchase with confidence believing that any product labeled as an insecticide will kill insects. However, when the merchandise is taken home and used with poor results, the industry, as well as the chiseler, is criticized and gets a bad name.

May I suggest that the manufacturers represented in this Association at least, present their products to the trade through their salesmen, and to the public through their advertisements and directions on packages, in such a manner that there will be no "come-backs" on the industry, because of false claims or unreliable statements regarding their merits.

Since I have been associated with this group, the Insecticide Committee has been working steadily on methods of improving the products and determining standards where-

by the killing power of an insecticide would be accurately checked before being put on the market and offered for sale.

The Peet-Grady method was a decided forward step, but today we are working on even more improved methods and towards definite standards. All such work by members of this group is appreciated—it promotes the manufacture of more efficient and more satisfactory insecticides that will be received more favorably by the consuming public than inefficient ones, and, in the long run, will tend to increase the demand for such products. Incidentally, improved sprays require improved sprayers. The sprayer manufacturers must co-operate and keep pace with the progress made by this Association and its members in research and developments.

In passing, may I call attention to the increasing popularity of insecticides over the last few years. There can be no question in any one's mind that the public is being educated to the fact that insecticides are household necessities. They are no longer spoken of in hushed voices for fear of our neighbor's criticism, but their merits are openly discussed as a topic of ordinary conversation, and may the most effective win out. Certainly no other advertising medium can compete with that just mentioned—word of mouth endorsement between friends and neighbors. It is the most effective known.

May I suggest also that insecticide advertisements be carefully considered from another angle—namely, the impression the consumer gets when reading the advertisement versus results obtained when using the product. Frankly, many wild and even ridiculous claims have been made for certain inefficient sprays, all of which would be damaging to the industry if taken literally. In order for the manufacturer to keep his skirts clean, it would be well to submit the directions on his package to the Food and Drug Bureau, Department of Agriculture, Washington, for approval whenever a change is necessary. This will not only protect the manufacturer, but with the splendid cooperation and helpful information received from Washington, he will be placed in an even stronger position than before.

In closing, may I predict a steady and ever increasing demand for a quality insecticide at a fair price, which will bring about the elimination of the chiseler's brands which pay only a small profit to those who handle them and give poor results to those who use them.

As your retiring President, I want to thank the officers and governors, as well as the various committees and the members of the Association individually for their support and co-operation during the year. It has been indeed a pleasure to work with you, one and all, and I hope that some good has been accomplished. Being a strong believer in Trade Associations, I am anxious to see ours prosper, and trust that the arguments and discussions developed at our meetings will always be interesting and helpful to all concerned, especially the participants. Therefore, I urge your active support of this Association by your loyalty to its ideals and your earnest endeavor to make the industries it represents respected by all.

A final thought can best be illustrated by a little story. You all remember back in the war days, the great parades that were held, how the boys marched off headed by a band with a pompous leader waving his baton, while the crowds clapped and cheered. Such a parade came down the street one day, the leader waving his baton in a most imposing manner, and when he reached the corner it was a magnificent spectacle to see him side-step, give

*Address of the President, 22nd annual meeting, Natl. Assn. Insecticide & Disinfectant Mfrs., New York, Dec., 1935. Read by John N. Curlett, McCormick & Co.

directions for the turn, and have the band execute it perfectly. The crowd cheered wildly—all except one little boy sitting on the curb who burst out laughing. A gentleman nearby reprimanded him severely—told him that he should be ashamed of himself—that such a sight should arouse his patriotism—make his heart swell with pride

and cause him to applaud instead of laugh. The boy agreed with all this and said he was sorry, but he could not help laughing when the thought struck him—"wouldn't that drum major look like hell if the band failed to follow him."

Healthful Dissatisfaction in Disinfectants

Report of the General Disinfectant Committee*

By W. B. EDDY
Rochester Germicide Company

DURING the year 1935 the disinfectant industry has, generally, shared the 15 per cent to 17 per cent volume improvement over 1934 figures shown by general industry. The demands for our products, from industrial buyers, have quickened with the pick-up in industry. New Federal Agencies, such as CCC, WPA and similar projects, have added a respectable volume of purchases. On the other hand, there has been little improvement in purchasing activities of tax supported institutions such as public schools, city and county departments and of the institutions supported wholly or in part by public charity, i.e., hospitals, religious orders, athletic organizations and the like. These two groups depend upon Mr. Average Citizen. He, in good part, through necessity, has forsaken the habit of paying taxes; and he, when approached for charity donations, may be excused for assuming that Washington will take care of such matters.

Your Committee reports the disinfectant industry to be in a state of healthful dissatisfaction with almost every angle of the business. Prices are too low, volume unsatisfactory, selling costs too high and competition as keen as ever. Taxes are on the increase, for obvious reasons. The Federal and State payroll levies represent a terrific burden to be shouldered by a not too prosperous industry. Some raw materials are indirectly boosted in cost by the levies imposed to give the mother pigs a measure of leisure. However, the Federal administration has not even hinted at paying us to make less disinfectants than we made in 1929. We just do it voluntarily.

The industry continues to be affected by an increased number of selling agencies handling disinfectants as a side line. Many sanitary supply houses, chiefly in the metropolitan areas, offer disinfectants as "loss leaders" to procure other more desirable business. Some manufacturers of other lines have added the manufacture of disinfectant to sell at the same margin of profit which they use in pricing much large volume items. Both of these types of competition create very little new trade, but cut in on the sales and profits of the concerns who create and pioneer the disinfectant business.

The real hope for us is in the fact that we know these troubles and we know what to do about them. For the most part, this side line competition is selling pine or coal tar disinfectants, as such, largely on a price basis. Little is known of these products by either the salesmen or the buyer. A certain amount of business will always be done on this indifferent basis. The big end of the business will go to the firms that know their goods. This means more than knowing that the phenol coefficient of the product is 5 or 10, or that it makes a milk-white emulsion in water, or that the mixture throws no oil in twenty-four hours. It means that the salesmen are educated to teach the buyer just what the disinfectant will do for him, what desirable results he will get, how little those results will cost him. The buyer is not sold disinfectants, he is sold clean, healthful rest-rooms, sanitary dark corners in plant basements and stairways, safe-cutting oil compounds, etc. He is not sold phenol coefficient any more than the average motorist is sold octane rating in a gasoline for his car.

*Before the 22nd annual meeting, Natl. Assn. Insecticide & Disinfectant Manufacturers, New York, Dec., 1935.

The latter buys more mileage, less knocks in his motor, and our buyer buys usable disinfectant mixture, producing certain desired results at a fraction of a cent a gallon. The good disinfectant salesman sells in terms of the buyer's desire for result and low, true cost. He sells these things and takes his order for the better grade of disinfectant at the better price. He knows and proves that the dollar and a half disinfectant is cheaper and more effective than the fifty-cent article. This method of trained defense against cut-price competition always has been and will be successful.

More new fields for the sale of disinfectants are right at hand. Good progress is reported in the sale of coal tar emulsions for use in protecting orchard crops from disease and insects. Cornell Extension Bulletin No. 313, issued January, 1935, and Virginia Agricultural College Bulletin No. 131, revised February, 1935, give a good outline of progress made along this line.

The field of sale of specialized disinfectant materials for use in control of the diseases that are spread through the common use of dishes and silverware in public restaurants has been scarcely tapped. In Chicago, perhaps elsewhere, all restaurants and hotels are legally required to use a certain type of chlorine dish-washing compound in every cleansing of tableware. The extension of this idea to other cities and states offers a tremendous possibility for sales, since hotels and restaurants use vastly more dish-washing material than they use of rest-room disinfectants. In addition to chlorine products, some manufacturers will certainly develop products of at least equal value, for this same use. Real progress, however, in developing this field will be slow until local or state Boards of Health see their responsibility for effecting similar legislation. Our excellent legislative committee may advise us how to promote this work, if that committee can spare time from its capable job of protecting us from restrictive legislation.

The remarkable grease-cutting properties of tar acid oil emulsions, when used as cleaning material for garage floors, filling stations, marble and tile floors in office buildings are, as yet, little known to the consumer. Plenty of work remains to be done along this line.

In closing, your Committee feels that the Association should adopt a set of standard specifications for different types of chlorine, coal tar, and pine oil disinfectants, commonly purchased by large Federal, State, Municipal and Industrial buyers. We have been approached, from time to time, by such organizations for comment on their specifications. We should be in a position to supply standard specifications and tests that would establish a fair basis for competent competition. The work of this committee would boost the standing of our industry by creating standards of value, tending to eliminate some of the absurdities so often found in various specifications made up by outside sources.

We recommend that our President appoint representatives of the makers of chlorine, pine oil and coal-tar disinfectants with provision for the inclusion of other products as they may be established, to the Committee of Disinfectants Standard and Specifications.

Specification for Liquid Insecticide

By DR. ROBERT C. WHITE*

Robert C. White Company

THAT this Association should be in a position to supply satisfactory specifications regarding insecticide to purchasing agents, whether they be those of private institutions, federal, state or municipal directors of purchases, has long been the contention of the writer, so that when at the Fall meeting of the Board of Governors of this Association he was asked if he would draw up such specifications, he readily agreed. He has given considerable thought to this matter, and in fact, for over four years has frequently discussed it with a great number who were interested in the need for such specifications.

The fact that he has not consulted any of the scientific committees in the Association in the formation of such recommendations as he shall make should not be misconstrued as indicative of his not relying on their judgment, but is due to his very pronounced view that we have already suffered sufficient from the injection of a great many scientific subjects into matters which should be confined entirely to a business viewpoint, with resultant great confusion.

We should keep before us the thought that the men who are purchasing these goods as officials of various federal, state or municipal purchasing bureaus, etc., are only in remote cases scientists. They know, as does any layman, what the product is that they want to purchase. They are posted to a fairly satisfactory degree as to what they want an insecticide to do and what they want it not to do, and these are the factors on which they buy.

As far back as four years ago, a few manufacturers endeavored to clarify this situation with certain purchasing divisions and their effort was immediately followed by the injection of a lot of scientific and pseudo-scientific information from drug millers, oil producers, essential oil houses and the like. This resulted in such confusion that to read the specifications of certain state purchasing departments today would lead one to wonder whether the specifications were a treatise on oil refining, the growth and production of pyrethrum, the history and technique of operating the Peet-Grady System, or an organic chemical text book.

The writer holds that in these cases the prospective purchaser is not buying hydro-carbon solvents. He does not intend to grow, mill or market pyrethrum, nor does he intend to operate a Peet-Grady test chamber. In all probability he wants to buy an insecticide which is effective, safe, pleasant and economical, and if he could be sure of these facts his lot in life would be made much happier, and manufacturers could sell him their product if it were reputable and standard with much more confidence and satisfaction between all parties.

All the maze of technical information which we have accumulated as manufacturers of insecticides in the last twenty years should not be thrust into specifications for buying. It is, however, of great value to us as manufacturers in the operation of our laboratories, and it should be one of the functions of this association to supply such technical information when and where required, but it should not be thrust unwanted into purchasing departments, where it is not wanted, where it is only infrequently understood, and where it permits the chiselers to come in and discuss these matters glibly and further befog the issue.

I hold that no man in this Association is more appreciative than the writer of the vast amount of painstaking scientific research that has been placed at the disposal of our membership. It has been, and will be, of inestim-

mable value to all conscientious manufacturers, but there is no reason why we should through mishandling permit it to interfere with business rather than assist business.

From this preamble it might readily be inferred that in the writer's opinion specifications should be simple.

An insecticide should kill.

An insecticide should kill quickly and easily.

An insecticide should kill without certain objectionable features, and it should always equal or exceed the 60% Peet-Grady Test requirements as approved by this Association.

The important thing, of course, is that the virtue is not to be confined only to the label.

We should keep away from the method of making it.

We should keep away from the naming of ingredients more than is absolutely necessary, for after all, we should remember that what the purchasing agent wants is an article that will be effective, is harmless to humans and pets when used in the ordinary and customary way without unnecessary drawbacks.

The writer therefore presents the following simple specifications:

(1) A liquid insecticide should be a fluid capable of destroying not less than 60% of flies in accord with the methods described in the Peet-Grady Test, (including properly resistant flies proven by described kerosene check tests, and meeting the exact conformance in regard to test chamber, temperature, ventilating, spraying equipment, air pressure, humidity and time periods involved) which method is on this date , 193 , approved by the National Association of Insecticide and Disinfectant Manufacturers, Inc.

(2) This product shall be harmless to man and household pets when used by the customary spraying methods. It shall not in accord with such use stain fabrics, wallpaper and general household furnishings. It shall not penetrate closed packages of food materials commonly found in homes, and it shall not corrode metals. It shall have no objectionable odor.

(3) It shall be non-explosive when not exposed to a temperature exceeding 130°F. and when not sprayed in the presence of an open flame.

The above specifications the writer holds are all that is required to give the purchaser protection in his buying, and confidence in the product bought. The methods of packing, shipping and payment are matters to be decided in each individual case in accord with the rulings laid down by the various governmental bodies.

The writer presents the above specifications with the realization that they are brief and revolutionary after all the maze of statistics that have been incorporated in other specifications, but he holds that they are clear, concise and sufficiently complete to cover the requirements for the purchase of an insecticide.

Following the presentation of this report covering a proposed practical specification for liquid household insecticides to be promulgated by the National Association of Insecticide & Disinfectant Manufacturers, the report was referred for the consideration of a new Committee on Specifications, to be appointed this year for the first time by President William B. Eddy.—Ed. Note.

*Report Special Committee before 22nd Annual Meeting, Natl. Assn. Insecticide & Disinfectant Mfrs., New York, Dec., 1935.

Advances in Disinfectants in 1935

Report of Scientific Section, Disinfectant Committee*

By DR. EMIL KLARMANN

Chief Chemist, Lehn & Fink, Inc.

AS compared with previous years, the past year was not particularly rich in significant developments in the disinfectant and antiseptic fields. Nevertheless, a number of publications appeared, which merit the attention of those who are interested in these subjects. The following paragraphs give a selection of those publications which to the reviewer, appear to be of the greatest importance.

Methodological Studies

A thorough investigation of Jensen's cover-glass technique for testing disinfectants was made by H. Hoffmann and H. Dehmel.¹ This technique calls for the application of a suspension of a 24-hour agar culture of the test organism to a series of cover glasses, which are then dried for one-half hour in the incubator and exposed to the action of various solutions of disinfectants. Phenol is used for comparison. After rinsing with water, transfers are made into fresh media and incubated for 48 hours.

H. Sharlit² published a method for the determination of the fungicidal action of various chemicals recommended for the treatment of fungus infections of the skin. The so-called "membrane method" calls for the incorporation of the chemical under investigation in collodium, with which the test tube is lined. After the film of collodium has dried, a culture medium is poured into the tube and allowed to solidify in a slant, at which time the medium is inoculated with the fungus.

Colloids

Colloidal silica, ferric hydroxide and alumina were found by M. Prica³ to exercise a bactericidal effect on certain microorganisms. The author considers the application of his findings to the purification of drinking water.

Simanite is described as silver manganate.⁴ More probably it is a complex mixture of silver and manganese oxides. It shows an intense oligodynamic action, but its advantage over other oligodynamic compounds is its retention of the anti-bacterial effect in the presence of sulphur and its compounds.

Chlorine and Chlorine Compounds

Sodium dichloro-sulfo-amino-benzoate has been placed on the market as "Phenochlorium."⁵ It has a chlorine content of 20 per cent.

Further studies on Azochloramid (n-n-dichloro-azodiacarbon-amidine) were reported by F. C. Schmelkes and E. S. Horning.⁶

Soaps

M. Bayliss and H. O. Halvorson⁷ studied the germicidal and detoxifying properties of soaps. They found Streptococcus lactis to be more resistant to the action of soap than pneumococci, although in general the soaps which are germicidal for pneumococci are also germicidal against streptococci, but to a lesser degree. There are some exceptions, however; thus sodium stearate, palmitate, alpha-elaeostearate and beta-elaeostearate are germicidal to pneumococci, but not to streptococci. B. coli and Staph. aureus are more resistant to the action of soaps than the other two microorganisms tested; only sodium 3, 5-diiodosalicylate and undecylenate are effective in concentrations of 1 per cent. against B. coli and Staph. aureus. The ability to neutralize the diphtheria toxin is common to all soaps, but varies considerably with their chemical constitution and spacial configuration.

Phenols

Q. R. Bartz, R. F. Miller and R. Adams⁸ studied the in-

roduction of isobutyl groups into phenol, cresol and homologous compounds by means of a rearrangement of the corresponding methylallyl phenol ethers, followed by catalytic reduction. The derivative with the highest germicidal action is 2-isobutyl-4, 5-dimethylphenol, which kills Staph. aureus in 5 minutes in a dilution of 1:5,000. The introduction of the isobutyl group was found to be less effective in enhancing the germicidal action of phenols than the introduction of the corresponding normal butyl or of a higher alkyl group.

Amines

H. Eschenbrenner discusses a disinfectant recently placed on the market in Germany, the active principle of which is taken from a class of compounds not hitherto used in disinfectants.⁹ It is the hydrochloride of a high molecular amine, or rather, of a mixture of several such amines. It is suitable for general disinfection as well as for sterilizing surgical equipment and for antiseptic purposes.

Essential Oils

The antiseptic action of some derivatives of oil of cinnamon was studied by A. Morel, A. Rochaix and P. Genton.¹⁰ A trade notice announces the introduction of a disinfectant containing bergamot oil as the active principle.¹¹ P. Gara studied the bactericidal action of various types of Eau de Colognes.¹² Since most formulas of eau de colognes represent primarily alcoholic solutions of essential oils, the discussion of this type of preparations belongs under the above heading. Staphylococci, diphtheria, colon and typhoid germs were used as test organisms. All samples tested were found to be rapidly germicidal; the germicidal action is greatly reduced by dilution with water.

Pine Oil Disinfectants

A discussion of the germicidal efficacy of pine oil disinfectants was published by G. F. Hogg and B. H. Little.¹³ Of the various chemical constituents of steam-distilled pine oil, alpha terpineol appears to be the most important as it shows the maximum disinfectant efficacy. Steam-distilled pine oils containing from 80-85% of alpha terpineol and practically free from hydrocarbons, are said to be commercially available.

Organic Acids

N. O. Galloway, H. Gilman and C. H. Werkman¹⁴ prepared a series of alpha-alkylated furoic acids, some of which were found to show a relatively high germicidal potency. Thus the phenol coefficient with respect to Staph. aureus of tert.-butyl furoic acid is 19, and that of the tert.-amyl furoic acid is 20.

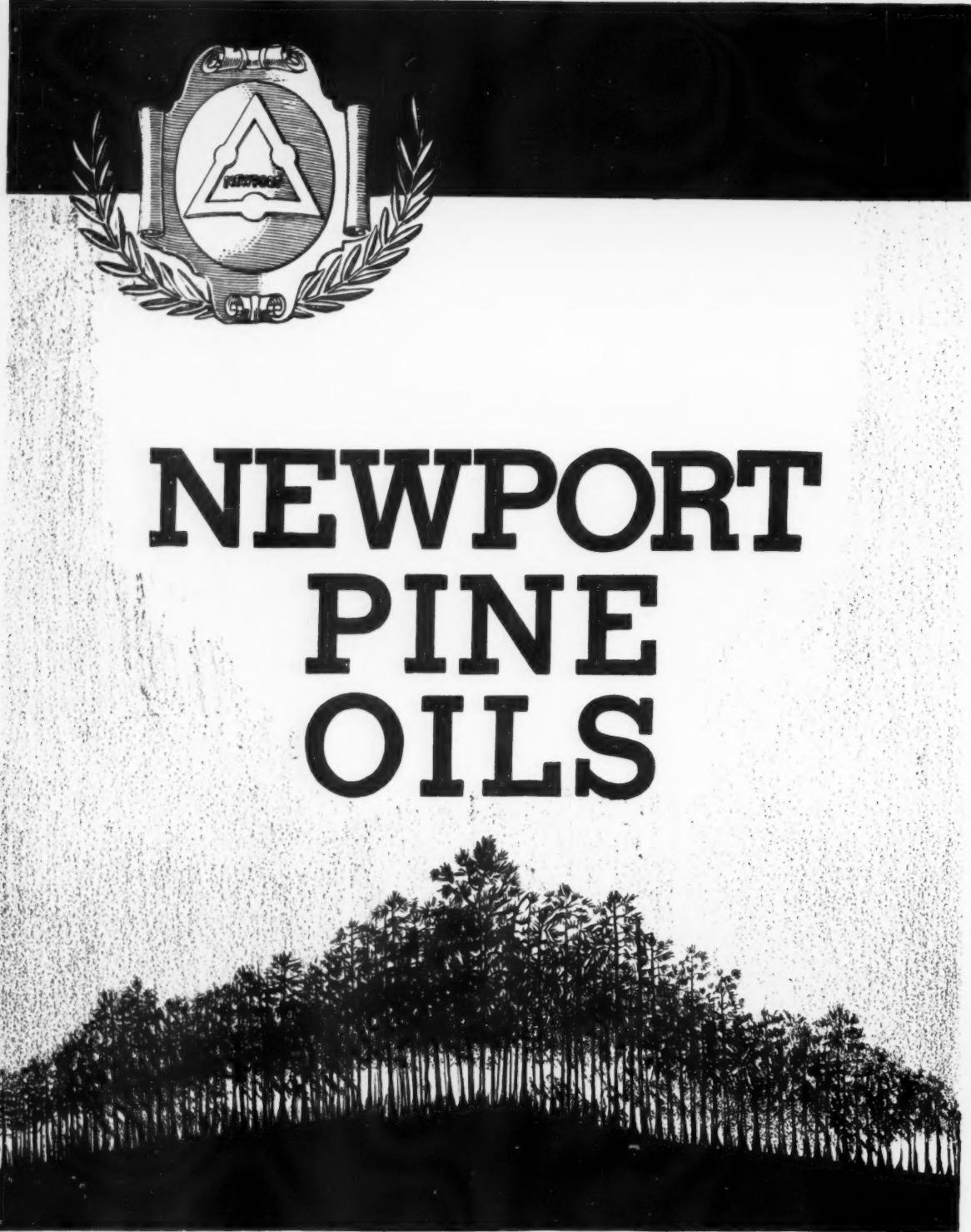
Indole

A thorough investigation of the inhibitory action of indole on the growth of numerous microorganisms was carried out by R. P. Tittsler and L. A. Sandholzer.¹⁵ A 1:1,000 dilution of indole in 2 per cent. peptone water was found to stop the growth of all cultures. Seventy per cent. of the cultures were inhibited by a 1:2,000 dilution, but all grew in a 1:5,500 dilution. No correlation was found between the Gram reaction and the tolerance for indole.

Dyes

Another paper has been added to the already very extensive literature on the bacteriostatic and bactericidal action of dyes and related compounds.¹⁶ S. A. Petroff and W. S. Gump found, in agreement with previous reports that Gram-positive microorganisms are susceptible, particularly to the basic tri-phenyl methane dyes, acridines, azines, chinoxalines, safranines, oxazines, thiazines and

*Before the 22nd annual meeting, Natl. Assn. Insecticide & Disinfectant Manufacturers, New York, Dec., 1935.



GENERAL NAVAL STORES COMPANY, INC.

Address Main Office: 230 Park Avenue, New York City



Plants De Quincy, La., Pensacola, Fla., Bay Minette, Ala.

anil quinoline compounds. In contrast to this, most triphenyl methane dyes show only a feeble bacteriostatic or bactericidal action upon the Gram-negative microorganisms. The most effective compounds against this group of bacteria are found in the anil quinoline class. Dyes of the latter category were studied also by C. H. Browning, J. B. Cohen, K. E. Cooper, L. S. Ellingworth and R. Gulbransen¹⁷ in continuation of previous work on this subject. Anil compounds, in which the 6-amino group of the quinoline nucleus is arylated, are powerfully bacteriostatic, preventing the growth of staphylococci and colon bacilli in dilutions greater than 1:1,000,000.

D. Bovet¹⁸ studied the antiseptic action of a series of rhodamine G esters in relation to their effect upon surface tension, and found a parallelism between these two effects. He observed also that a secondary, photosensitizing action is superimposed on the antiseptic action of the lower members of this series, which consequently are more active in the light than in the dark. Substances with closely related chemical constitutions, showing similar absorption spectra, can nevertheless behave very differently in respect to their photosensitizing effect.

Organic-Mercury Derivatives

A systematic investigation of the effect of various groups attached to mercury upon the bacteriostatic action of organo-mercury compounds was carried out by M. C. Hart and H. P. Anderson.¹⁹ Ortho-hydroxyphenylmercuric chloride was found to be the most powerful bacteriostatic compound in the series tested.

Several new mercury compounds were prepared and studied by E. Moness, S. E. Harris and W. G. Christiansen.²⁰ O. K. Stark and M. Montgomery found basic merphenyl nitrate to be an extremely powerful inhibitory agent.²¹ This compound is a double salt of phenylmercuric hydroxide and the normal phenylmercuric nitrate. It inhibits *B. coli* in a dilution of 1:12,000,000. *Staph. aureus* is inhibited in even lower concentrations.

The tissue culture method was applied to a comparative examination of Metaphen and phenol by A. J. Salle and A. S. Lazarus.²² It was found that phenol and Metaphen are of the same order of toxicity when tested by this method.

A thorough inquiry into the value of mercurochrome was carried out by J. H. Hill.²³

Ultra-Violet Rays

An investigation of the bactericidal action of monochromatic ultra-violet rays was carried out by J. Buchholz and A. V. Jeney.²⁴ Anti-bacterial action was noted in the range between 302 and 240 microns. The strongest effect was produced between 253 and 256 microns, while above 302 microns, no bactericidal action occurred even upon prolonged irradiation. The bactericidal action was found to be proportional to the sensitivity of the individual strain. Most sensitive were the pathogens, while the saprophytes were less affected; spore formers showed the greatest resistance. There was no selective susceptibility of any strain for any specific wave length. The germicidal effect could be obtained also in an atmosphere of hydrogen. Previous irradiation of the media produced no bacteriostatic action. The importance of the frequency leads to the conclusion that the effect is photo-electric in character.

Super-Sonic Waves

Z. C. Liu and A. C. H. Yen studied the previously observed effect of super-sonic waves on microorganisms and attribute it to the presence of dissolved gas, ordinarily air.²⁵ A weaker effect results when hydrogen gas is used instead of air to saturate the bacterial suspension.

Survival of Bacteria in Air

Results of considerable importance for the further study of air-borne infectious diseases were obtained by Wm. F. Wells.²⁶ This author secured positive evidence that minute droplets expelled in coughing, sneezing or even in talking, do not fall immediately to the floor. They evaporate and may leave behind microorganisms which drift in the air,

alive for many hours. It was assumed previously that such droplets fall down within a few feet of their source, and that therefore, the range of possible infection is very small. It appears, however, that the droplets evaporate almost instantaneously, leaving behind tiny "nuclei" which are easily carried by the lightest air currents. It was found that some types of germs remained alive for several days, while others died in less than an hour. Of particular hygienic significance is the difference in viability between respiratory and intestinal bacteria. While none of the intestinal germs were found alive after eight hours, four respiratory microorganisms were recovered alive after 48 hours' suspension in the air. Among the microorganisms remaining alive for 48 hours or longer, are those causing pneumonia, diphtheria and scarlet fever. The tests were carried out in a special glass-lined chamber in which atmospheric conditions could be simulated, and into which suspensions of microorganisms could be injected, without the danger of their escaping.

References

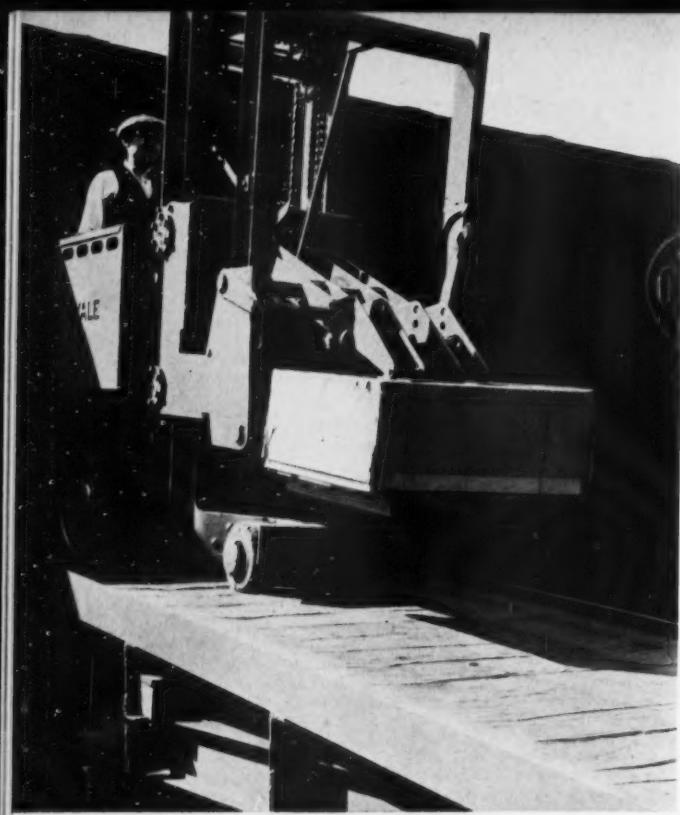
1. H. Hoffmann and H. Dehmel, Z. f. Bakteriol. 134, 182 (1935).
2. H. Sharlit, Arch. Dermatol. und Syphilol. 31, 215 (1935).
3. M. Price, Z. f. Hyg. Infektionskrankh. 116, 385 (1934).
4. Manuf. Chemist, 5, 409 (1934).
5. Manuf. Chemist, 6, 97 (1935).
6. F. C. Schmelkes and E. S. Horning, J. Bacteriol. 29, 323 (1935).
7. M. Bayliss and H. O. Halvorsen, J. Bacteriol. 29, 9 (1935).
8. Q. R. Bartz, R. F. Miller and R. Adams, J. Am. Chem. Soc. 57, 371 (1935).
9. H. Eschenbrenner, Pharm. Zeitg. 80, 94 (1935).
10. A. Morel, A. Rochaix and P. Genton, Compt. rend. Soc. Biol. 114, 45 (1935).
11. Manuf. Chemist, 6, 131 (1935).
12. P. Gara, Z. f. Bakteriol. I, 132, 110 (1934).
13. G. F. Hogg and B. H. Little, Soap, 11, 125 (1935).
14. N. O. Galloway, H. Gilman and C. H. Werkman, Proc. Iowa Akad. Sc. 40, 81 (1933).
15. R. P. Tittler and L. A. Sandholzer, J. Inf. Dis. 57, 64 (1935).
16. S. A. Petrif and W. S. Gump, J. Lab. Clin. Med. 20, 689 (1935).
17. C. H. Browning, J. B. Cohen, K. E. Cooper, S. Ellingworth and B. Gulbransen, Proc. Roy. Soc. (London) B 115, 783, 791 (1935).
18. D. Bovet, Helv. Chim. Acta 17, 1460 (1934).
19. M. C. Hart and H. P. Anderson, J. Am. Chem. Soc. 57, 1059 (1935).
20. E. Moness, S. E. Harris and W. G. Christiansen, J. Am. Pharm. Assn. 24, 386 (1935).
21. O. K. Stark and M. Montgomery, J. Bacteriol. 29, 6 (1935).
22. A. J. Salle and A. S. Lazarus, Proc. Soc. Exptl. Biol. and Med. 32, 937 (1935).
23. J. H. Hill, J. A. M. A. 105, 100 (1935).
24. J. Buchholz and A. V. Jeney, Z. f. Bakteriol. 135, 299 (1935).
25. Z. C. Liu and A. C. H. Yen, Proc. Soc. Exptl. Biol. and Med. 32, 486 (1934).
26. W. F. Wells, Science News Letter 27, 717 (1935).

The rotenone content is a better criterion for the evaluation of derris root than the ether extract. It is only when the rotenone content is as low as 2 per cent and the ether extract is high that the last factor influences activity. W. Spoon and P. A. van der Laan, *Indische Mercuur* 58, 625-7 (1935).

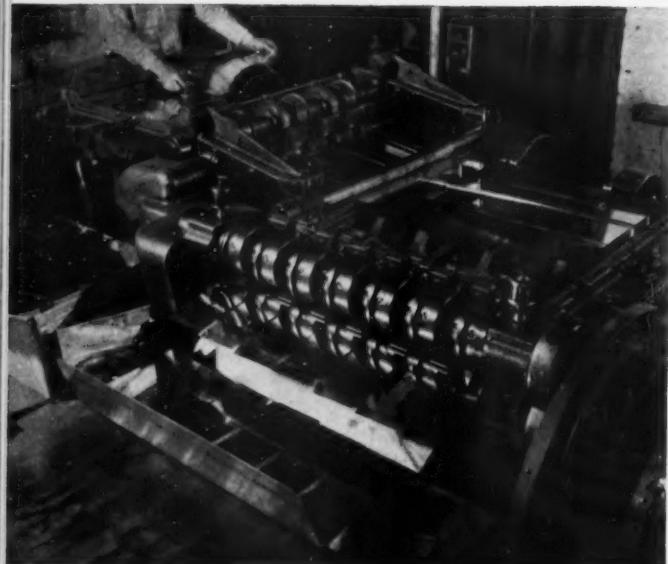
McCORMICK and CONTINENTAL WIN!

During the annual convention of the National Association of Insecticide and Disinfectant Manufacturers held at the Waldorf-Astoria Hotel, New York last month, there was a display of numerous advertisements which have appeared in SOAP during 1935. Those attending the meeting were asked to vote on the advertisement which they considered best. The Continental Can Company advertisement which appeared on page 89 of the June issue of SOAP and McCormick & Company's December outside back cover tied with the most votes.

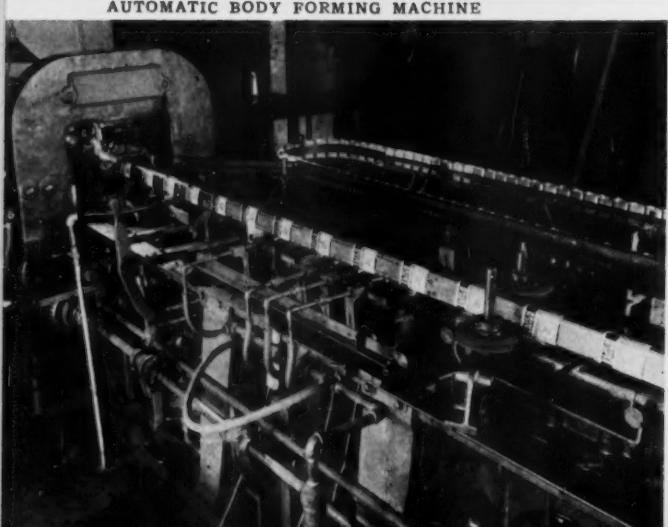
From Tons of to the finished



UNLOADING TIN-PLATE FROM CARS

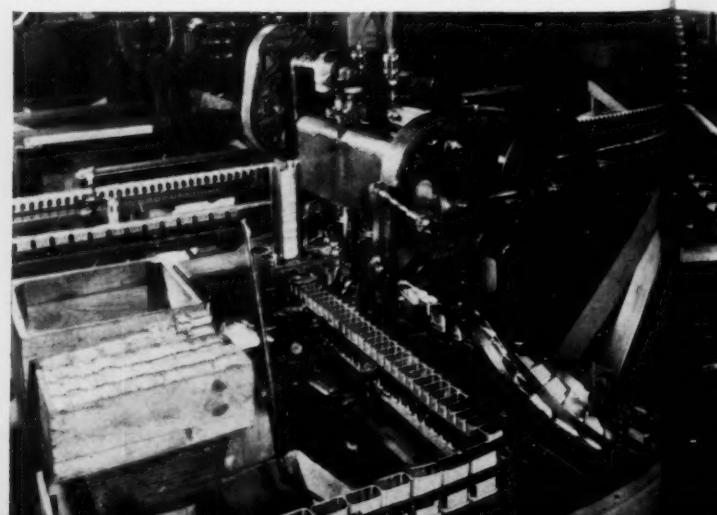


SLITTING FLAT SHEETS INTO BODIES



AUTOMATIC BODY FORMING MACHINE

BODIES ENTERING AUTOMATIC DOUBLE SEAMING MACHINE



THE attractive lithographed tin container that carries your insecticide, stock spray, floor wax, etc. to market starts out as so much tin plate. In these photographs, supplied by courtesy of National Can Company, we trace the various steps in the manufacture of standard tin containers, following one of your containers through the many plant departments where the tin plate is lithographed, cut, shaped, seamed, soldered, and finally tested.

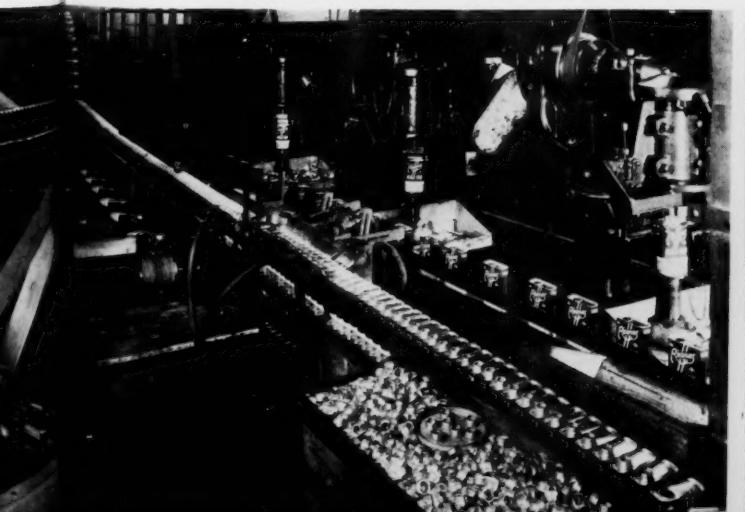
Ten or fifteen years ago, the most common container for insecticides and other sanitary products was the circular can. Today most users of tin containers prefer the rectangular shape, which has become standard for fly sprays, waxes, and disinfectants. This style container is stacked easier, affords better opportunity for display of the name and illustration

f Tin Plate d Insecticide Can

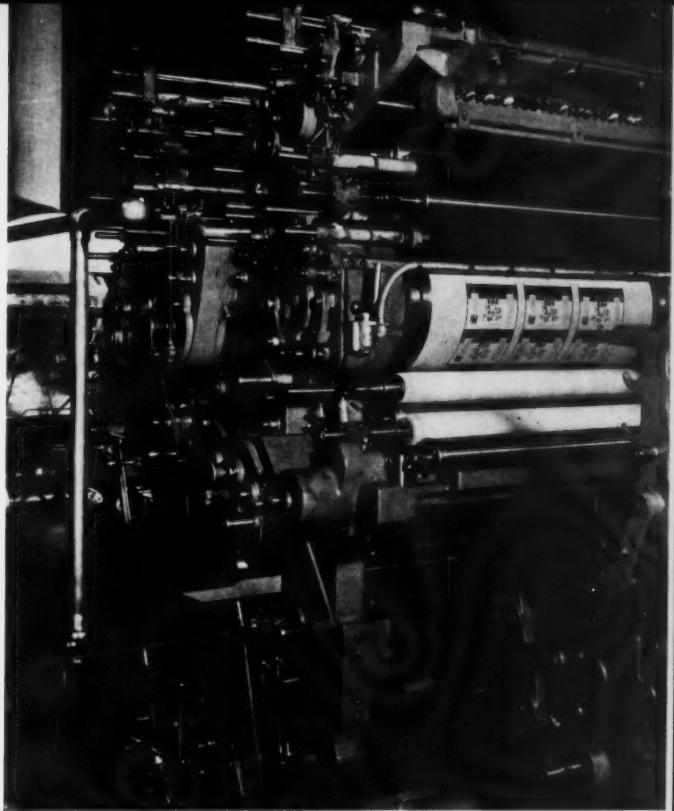
on the package, and gives the buyer the impression of being a bigger and bulkier package. Next to a sphere, the cylinder looks the smallest for its cubical contents and so does not lend itself well to size exaggeration.

There is no known yardstick by which the sales value of a container can be accurately measured. The right type container can be a great help in stimulating sales, however, as every manufacturer knows. One container will help sell a product, while a competitive product in a different container, although perhaps just as good a one, will collect dust on the dealers' shelves. Due to the problems encountered in practical tin can manufacture, the help of the can manufacturers is almost imperative when you are planning on adopting a new metal container.

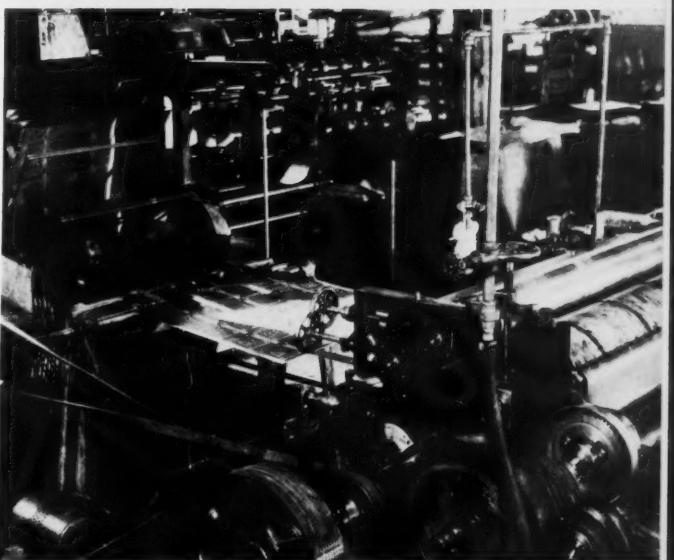
SCREW BEING SOLDERED TO TOP OF CANS



TWO-COLOR LITHOGRAPH PRESS FOR LITHOGRAPHING BODIES



APPLYING VARNISH TO LITHOGRAPHED SHEETS



CANS BEING TESTED



Star Performers

KEROSPRAY VANILLA BOUQUET M M & R

Ideal for dairy and food product sprays where deodorized kerosene is used.

For Insect Sprays

PERFUME OIL SWEET GRASS

A pungent, natural lilac type with excellent covering power.

For Insect Sprays

PERFUME OIL ROSE FX M M & R

Inexpensive and exceptionally well-fixed odor.

For Para Blocks

AVAILABLE

to manufacturers of

INSECT SPRAYS PARA BLOCKS LIQUID SOAPS

to add

NEW SALES APPEAL TO YOUR 1936 LINE

Six star performers...chosen for their odor appeal and their ability to provide more positive results at minimum cost.

Perfected after long experimentation, these M M & R Perfume Oils are planned to fill definite requirements. Offered in highly concentrated form they provide the increased volume of odor that makes possible a noticeable lowering in manufacturing costs. The distinctive odors of these perfume oils will provide the noticeable sales appeal your products need.

Testing Samples Available!

Note to Soap Manufacturers:

Notable reduction in production costs without any sacrifice in quality is possible through the carefully planned use of inexpensive perfume oil substitutes in place of expensive natural oils. Let us tell you how!

PERFUME OIL PALMA BOUQUET M M & R

A pleasant masculine odor with exceptional lasting qualities.

For Liquid Soaps

PERFUME OIL LUXOR BOUQUET "S" M M & R

A clean, highly refreshing and popular odor.

For Liquid Soaps

PERFUME OIL BLUEBELL FX M M & R

A new, lilac type of extraordinary power. Highly recommended.

For Para Blocks

MAGNUS, MABEE & REYNARD, INC.

QUALITY ESSENTIAL OILS, BALSAMS,

AROMATIC CHEMICALS, ETC... SINCE 1895

32 CLIFF STREET



NEW YORK, N.Y.

The Phenol Coefficient

As a Measure of the Practical Value of Disinfectants*

By JACK C. VARLEY

Baird & McGuire, Inc., St. Louis

THE phenol coefficient test has been employed for determining the germicidal efficiency of disinfectants for over thirty years, since Rideal and Walker¹ developed their original method in 1903. The Hygienic Laboratory Method² is a modification of the Rideal-Walker Method, and the Food and Drug Administration test³ is a combination of the best features of both. The phenol coefficient technique as employed today does not differ fundamentally from the original test as described by Rideal and Walker thirty-three years ago, and in one form or another it is being used as a means of testing disinfectants in every civilized country in the world.

For approximately twenty years the U. S. Department of Agriculture has used the phenol coefficient test in the regulation of disinfectants in this country and it is still the most satisfactory method available for this purpose. In addition to being a satisfactory index of the germicidal value of phenol-like disinfectants, the phenol coefficient is used as a basis for determining the dilutions which may safely be employed in practice. This dilution is calculated by multiplying the phenol coefficient by twenty, which will give a germicidal efficiency equal to five per cent carbolic acid. Since in this country five per cent carbolic acid is accepted as the standard of excellence for general disinfection, phenol-like compounds must be recommended for general use in dilutions equal to five per cent phenol in germicidal efficiency. This method of calculating dilutions for general use for this class of disinfectants—twenty times the phenol coefficient—is employed by the U. S. Food and Drug Administration in the regulation of germicides for use on inanimate objects and it is found to be quite satisfactory.

The use of this factor—twenty times the phenol coefficient—affords a wide margin of safety. As pointed out by Reddish,⁴ the dilutions calculated on this basis are of sufficient strength to kill all pathogenic microorganisms which cause epidemics. Most bacteria which cause epidemiologic diseases are similar in resistance to *Bacillus typhosus*, the test organism in the phenol coefficient test. The dilution of the disinfectant which kills *Bacillus typhosus* is usually sufficiently germicidal to kill most of the disease-producing microorganisms. There are some, however, which are more resistant and it is these which are considered in calculating the dilutions to be recommended for use in practice.

Klarmann⁵ has indicated that this factor is not enough, that some disinfectants when diluted to twenty times their phenol coefficient will not kill certain important disease-producing bacteria, especially *Streptococcus hemolyticus*. Reddish,⁴ however, has listed other factors of safety which must be noted in this connection, and be considered. These are more than enough to supply a satisfactory margin of safety. This matter has been actively discussed before this Association for the past two years, but so far no one has as yet attempted to prove his contentions by submitting information of a practical nature. The simplest way to settle a question of this kind is to make actual tests under practical conditions, this being the only means of coming to a definite conclusion regarding this all-important matter.

I have devoted the past six months to a practical study of this problem. I have attempted to answer this question: "Will a phenol-like disinfectant, in a dilution equal to twenty times its phenol coefficient, be effective in killing pathogenic microorganisms under practical condi-

tions of use?" Another question I have attempted to answer in this investigation is whether high phenol coefficient disinfectants and low coefficient disinfectants will be equally effective when diluted to twenty times their respective phenol coefficients. For this purpose I have used representatives of two classes of phenol-like disinfectants, namely, coal tar and cresylic acid, or, as they are commonly known, "Tar Oil" and Cresol Compound disinfectants. The first represents the emulsifiable type and forms a milky suspension in water, while the other forms clear solutions with water.

The phenol coefficient of each disinfectant was first determined by the Food and Drug Administration Method. The figures obtained were used as a basis for calculating the dilution for general use—twenty times the phenol coefficient—and these dilutions made with distilled water. The coal tar disinfectants employed had phenol coefficients ranging from 2 to 20 (coefficients 2, 3, 4, 5, 6, 7, 8, 10, and 20), while the cresol compound disinfectants used ranged in strength from coefficient 2 to 6. *Bacillus typhosus* was the only test organism employed in obtaining these phenol coefficient figures. No attempt was made in any case to determine the *Staphylococcus aureus* phenol coefficient since the above calculations for practical dilutions are always based on the *Bacillus typhosus* figure.

Since there is no standard method for testing disinfectants under practical conditions, it was necessary to develop an entirely new test and establish certain arbitrary conditions for the purpose of this special investigation. The following procedure was employed in this study:

An area of 100 square inches was marked off on special flooring material obtained for the purpose. This was washed thoroughly, rinsed and allowed to dry. Broth cultures of the test organisms employed were diluted so that 1 cubic centimeter contained approximately 100,000 organisms. One cubic centimeter of the culture suspension was spread over the entire 100 square-inch test area by means of a small rubber spreader (which is two inches wide). Five minutes later a cotton swab, previously moistened in sterile water, was rubbed back and forth over representative portions of the test area twelve times, after which it was twirled vigorously in 15 cubic centimeters of melted agar cooled to 45°C, thoroughly mixed by rotating, and then poured into a sterile Petri dish. This is the control plate and was made at the beginning of each test. Immediately after the control swabbing, 3 cubic centimeters of the diluted disinfectant was applied to the test area and spread over the entire 100 square inches by means of the rubber spreader. Smears were taken with a moistened cotton swab at the end of 5, 10, 15, 20, 25, and 30 minutes, (using the same procedure employed in taking the control culture) inoculated into 15 cubic centimeters of melted agar and poured into Petri dishes. All plates were then incubated at 37°C for 48 hours. At the end of this time the plates were observed for growth of the test organisms and colonies counted when present. Each plate, with the exception of the control plate, was then streaked with a fresh 24-hour broth culture of the test organism and incubated for 24 hours to test for bacteriostatic action in the agar. The test was conducted at ordinary room temperature.

Three test organisms were employed in these tests, namely, *Staphylococcus aureus*, *Bacterium coli*, and *Bacillus typhosus*. *Staphylococcus aureus* is representative of the most resistant of the non-sporing organisms, including

*Before the 22nd annual meeting, Natl. Assn. of Insecticide & Disinfectant Manufacturers, New York, December, 1935.

YOUR OPPORTUNITY
to produce a better
PERFUMED FLY SPRAY



USE

MIMOXENE
VEROXENE

... the modern scientific way to perfume fly sprays . . . at less than 3 cents per gallon

Write for samples and further information relative to Mimoxene and Veroxene—the super effective Kerosene and Petroleum Distillate odorizers.

P. R. DREYER INC.

12 EAST 12th ST.

NEW YORK

It's the odor that



sells the Product

Streptococcus hemolyticus and *Streptococcus viridans*, while *Bacterium coli* and *Bacillus typhosus* represent the weaker ones, or rather, the pathogenic microorganisms of average resistance. While much larger numbers of these test organisms were added to the test area than are found ordinarily under practical conditions, this was done to establish maximum or even exaggerated conditions. By the use of these three test organisms, representing the most resistant microorganisms (excluding spores) as well as those of average resistance, it is possible to draw reasonable conclusions as to the value of disinfectants for killing under practical conditions those bacteria which cause epidemiological diseases.

The flooring materials used were representative of those ordinarily met with in practice. Wood, linoleum, asphalt, rubber, and enameled flooring was employed. These floors fall into two classifications, porous and non-porous. The asphalt and wood are porous, while the rubber, linoleum, and enameled floors are non-porous. For physical reasons, the non-porous materials were used in the majority of these tests because more accurate results were obtained. The type of floor, however, had no bearing on the results of the test insofar as germicidal activity of the disinfectant was concerned, since this activity was exerted in the porous floors just as readily as on the non-porous materials.

Another factor in this test which must be considered is the dilution which takes place when the disinfectant solution is added to the test area following the application of the 1 cubic centimeter of culture suspension. Since 3 cubic centimeters of disinfectant were added five minutes after 1 cubic centimeter of culture suspended in water was applied, and before it had dried, there is an immediate further dilution of the disinfectant of approximately 30 per cent, or somewhat less. In some of the tests the original disinfectant dilution was made more concentrated to take into account this further dilution, but in most of them this factor was ignored, although the additional dilution worked to the disadvantage of the disinfectant. The reason for this was that even in spite of this further dilution with the culture suspension on the test area, the disinfectant was accomplishing the desired effect. This served to demonstrate again the very wide margin of safety that is allowed in making the dilution of the disinfectant originally. This adjustment of the dilution to take into account this addition of water was resorted to in only ten out of almost a hundred tests.

In this preliminary report, the results of these tests will not be given in detail.* The results of approximately one hundred tests (which includes the checking tests) are summarized at this time. In interpreting the data presented here, it must be remembered that in every test very large numbers of the test organisms were employed, far more than are met with ordinarily in practice. In practically every case the control count—that is, the number of organisms removed from the flooring before the disinfectant was applied—was "uncountable." The killing of these very large numbers of representative disease-producing organisms within the time periods indicated illustrates the high germicidal efficiency of the dilutions of the disinfectants employed.

Coal Tar Group

Test organism: *Staphylococcus aureus*. The tests conducted on the Coal Tar Group of disinfectants, which ranged in strength from phenol coefficient 2 to 20, gave the following results when tested against a standard, resistant strain of *Staphylococcus aureus*:

In 71 per cent of the tests this organism was killed within 5 minutes. In 11 per cent of the tests complete kill resulted within less than 10 minutes, but not in 5 minutes; in 15 per cent of the tests complete kill resulted within 20 minutes, but not in 10 minutes; while in 3 per cent of the tests all were killed within 30 minutes, but not in 20 minutes. Under the conditions of this test, the average length of time necessary to kill these exaggerated numbers of this resistant organism was 9 minutes.

*The protocols will be published in detail in a later paper.

Test organism: *Bacterium coli*. When *Bacterium coli* was used as the test organism in experiments with coal tar disinfectants (the same ones used in the tests with *Staphylococcus aureus*) the following results were obtained:

In 65 per cent of the tests complete kill resulted in (or within) 5 minutes; 19 per cent showed complete killing within 10 minutes, but not in 5 minutes; 12 per cent killed within 20 minutes, but not in 10 minutes; while 3 per cent killed within 25 minutes, but not in 20 minutes. Under the conditions of this test, *Bacterium coli* in exaggerated numbers was completely killed in an average time of 8½ minutes.

Test organism: *Bacillus typhosus*. When *Bacillus typhosus* was used as the test organism in tests on the same coal tar disinfectants, all of the organisms were killed within 5 minutes in every case.

Cresol Compound Group

Test organism: *Staphylococcus aureus*. The tests conducted on cresol compound disinfectants with phenol coefficients ranging from 2 to 6 gave the following results when tested against *Staphylococcus aureus*: In 80 per cent of the tests this organism was killed within 5 minutes, while in 20 per cent of the tests 10 minutes were required to effect complete killing of all the organisms.

Test organism: *Bacterium coli*. In 66 per cent of the tests *Bacterium coli* was killed within 5 minutes, while in 34 per cent of the tests complete killing of all the organisms resulted within 10 minutes.

Test organism: *Bacillus typhosus*. Under the conditions of the test, *Bacillus typhosus* was killed within 5 minutes in every test.

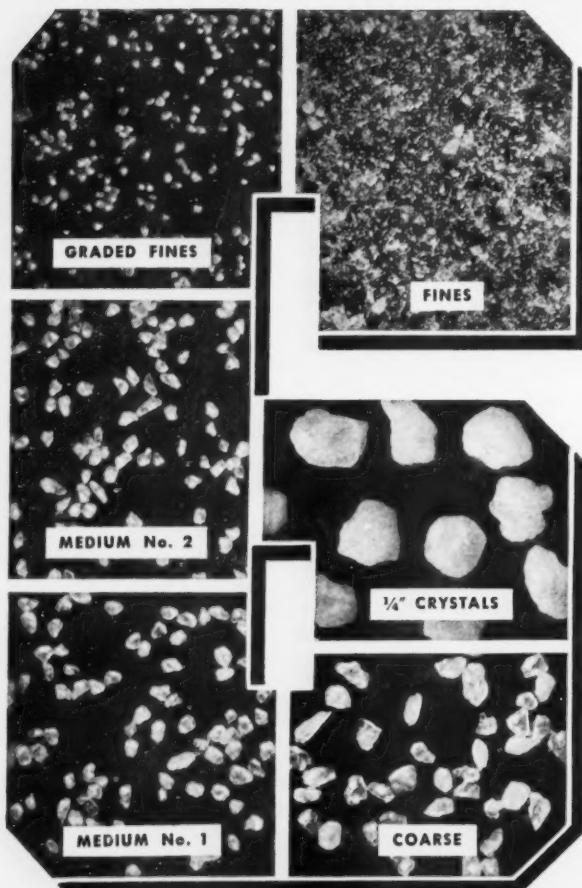
Five Per Cent Carbolic Acid

Five per cent phenol was used on two kinds of floors with *Bacterium coli* as the test organism. Only two tests were made. In one test all the organisms were killed within 5 minutes, while in the other all but three were killed in 5 minutes, and complete kill resulted within 10 minutes.

In connection with these tests it must be noted that the number of organisms surviving after the various time periods were very small. In comparison with the very large numbers applied to the floor surfaces, as indicated in the control counts, the few still living after these time periods were insignificant. If numbers of organisms had been applied to the test surfaces comparable to the number found in practice, it is almost certain that all of the test organisms would have been killed within the shortest time period of the test, five minutes. Since it is difficult, if not impossible, to accurately simulate the numbers of microorganisms found under practical conditions, the expediency of adding exaggerated numbers is justified. However, in evaluating the results obtained in these tests this factor must be considered. When this is done it is evident that the disinfectants employed in these tests in the dilutions used completely kill as many or more bacteria as are found under practical conditions.

In order to prove this, several tests were made to determine the number of bacteria found on ordinary dirty floors. The cultures were taken from these dirty floors in the manner described above. Six such tests gave an average of 1,700 bacteria per 100 square inches—or rather, that part of 100 square inches covered by the method of taking the smears (or cultures) as previously described. In some of the tests reported above the control count approximated the count obtained from ordinary floors, and in these instances there was complete killing of the test organisms within 5 minutes in almost every case. Of eleven such tests, only two did not kill all the test organisms within 5 minutes, and in these two cases the counts after 5 minutes were quite low, 3 and 52 respectively. In one case the control count was 4,000 and all the test organisms were killed within 5 minutes, while in another the control count was 1,936 and 52 organisms

(Turn to Page 121)



FREE FLOWING SIZES

PARADOW

(PURE PARADICHLORBENZENE)

In appearance, uniformity of size and marked quality, Paradow is a typical Dow product.

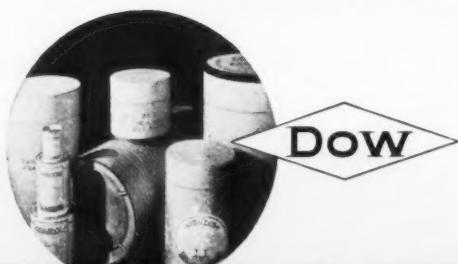
Available in six carefully graded sizes, it meets many specific requirements, either in its original form or processed into other products or private brand packages by intermediate manufacturers. Special sizes are procurable on order.

In products such as moth preventatives, deodorants and many others, Paradow has earned a decided preference.

Let us give you full information on Paradow—the superior Paradichlorbenzene.

OTHER DOW CHEMICALS

Coumarin—Methyl Salicylate—Methyl Anthranilate—Phenol—Dowicides (Disinfectants)—Caustic Soda—Carbon Tetrachloride—Ethylene Dichloride—Propylene Dichloride—Orthodichlorbenzene and over 200 others.



THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

BRANCH SALES OFFICES: 30 ROCKEFELLER PLAZA, NEW YORK CITY • SECOND AND MADISON STREETS, SAINT LOUIS

Effect of Metals on Fly Sprays

A Study of the Effects of Metals and Other Container Materials on Pyrethrum Liquid Insecticides

By DAVID G. HOYER*

Chief Chemist, John Powell & Co.

In the history of pyrethrum fly sprays many problems have arisen and many difficulties have confronted the manufacturer in his attempt to produce a reliable and practical product. Many of these problems were due to manufacturing difficulties but there were—and still are—unsolved problems of a practical nature and problems arising from lack of consideration for the physical and chemical nature of pyrethrum and its toxic principles. Any of these factors when present detract from the efficiency of the spray and cause expense and embarrassment to the manufacturer.

Prior to 1930 the oil vehicle was a factor which contributed to the inefficiency of fly sprays. Many manufacturers used a vehicle which closely resembled in physical properties a cleaning fluid. It was too volatile for the formation of a sufficiently dense mist and was therefore effective only at a very short range. Research and subsequent publications remedied this situation.

The correct and safe perfume was another source of trouble and still is. It was found that perfuming constituents containing terpenes or reducing substances caused a deterioration of the toxic principles of pyrethrum.

Pyrethrum fly sprays used to be, and still are today, to a small extent, packaged in flint glass bottles. These bottles of fly spray would stand on store shelves or in show windows exposed to sunlight or diffused light and in a short time would be worthless. It was when fly sprays were put up in metal containers that they were protected from the action of light.

For several years we have noted differences of color in commercial brands of fly sprays packaged in metal containers. Almost invariably these off-color sprays were found to be decidedly below standard in killing power value when tested in the Peet-Grady chamber. There has been no certain explanation of these color changes, but it was learned from practical observation that certain lacquered containers caused a color loss of the product. In each instance Peet-Grady tests showed a loss in toxicity. During 1934 instances were brought to our attention where one or two containers out of a dozen cans in a case of pyrethrum fly spray, made from the same batch of concentrate, were off color and ineffective. Sprays so affected were individually tested in the Peet-Grady chamber and were found to be 50 per cent less toxic than the unaffected sprays. The interiors of these containers were examined and were found to be partially covered with a brownish paint-like material. This situation prompted the present investigation of the effect on pyrethrum fly sprays of metals and other materials used in the manufacture of metal containers.

Samples of tin plate, confectioner's glaze and flux were obtained from one of the leading can manufacturers. These ingredients were introduced separately or in combination into flint glass bottles containing chemically and biologically standardized *pyrethrum fly sprays. One per cent by weight of each container ingredient was used in each sample of fly spray. The bottles were then sealed and placed in the dark where they remained for ten months. All the sprays were shaken and observed at frequent intervals.

The following tabulated data shows that the control

*Address before the 22nd annual meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., New York, Dec., 1935.

*Mr. Ernest Hartz assisted with the chemical work and S. Zarkoski von Schmidt ran the Peet-Grady tests in our laboratory.

fly spray underwent a loss in pyrethrin content determined chemically by the Seil method of but 3/10ths of 1%. This insignificant loss of course was not detected by the Peet-Grady test.

The sample (No. 1-C) to which was added the tin plate did not change in appearance throughout the ten months period. Chemically, it lost 1% in pyrethrin content and showed no detectable loss biologically.

The sample (No. 2-C) containing flux developed a small amount of a white precipitate after one week's standing which imparted a cloudiness to the spray. At the end of ten months this spray lost 3.7% in pyrethrin content and the biological kill dropped from 68% to 64%.

The sample (No. 3-C) containing confectioner's glaze developed a green color after three days of storage. The green color persisted throughout the entire ten months period at which time chemical analysis showed a 41.5% loss in pyrethrin content. The Peet-Grady test showed a drop in kill from 68% to 45%.

The sample (No. 4-C) containing tin plate and flux underwent a slight color loss and the pyrethrin content fell off 3.5%.

The sample (No. 5-C) containing tin plate and glaze assumed a deep green color after one week. The color continued to darken and after two months changed to a reddish-brown. There was no further color change and after ten months the pyrethrin content had deteriorated 36.5%. The Peet-Grady test showed a kill of 46%.

Another sample (No. 6-C) was treated with 1% each of tin plate, glaze and flux. A color loss was apparent after one week's storage and at the end of six months the spray

TABLE NUMBER ONE
THE EFFECT OF TIN PLATE, CONFECTIONER'S
GLAZE AND FLUX ON PYRETHRUM
FLY SPRAYS

Sample Number	Ingredients Added 1/10 by Weight	Date	Grams per 100 cc				% Decomposition (Chemical)	% Down 10 min.	% Kill 24 hrs.
			Pyrethrin I	Pyrethrin II	Pyrethrin Total				
C Control		1-15-35	42.6	56.9	99.5	...	97	68	
		11-15-35	42.5	56.7	99.2	0.3	98	69	
1-C Tin plate		1-15-35	42.6	56.9	99.5	...	97	68	
		11-15-35	42.1	56.4	98.5	1.0	97	66	
2-C Flux		1-15-35	42.6	56.9	99.5	...	97	68	
		11-15-35	41.6	54.2	95.8	3.7	97	64	
3-C Glaze		1-15-35	42.6	56.9	99.5	...	97	68	
		11-15-35	26.5	31.7	58.2	41.5	85	45	
4-C Tin plate Flux		1-15-35	42.6	56.9	99.5	...	97	68	
		11-15-35	41.2	54.9	96.1	3.5	96	65	
5-C Tin plate Glaze		1-15-35	42.6	56.9	99.5	...	97	68	
		11-15-35	25.0	38.2	63.2	36.5	91	46	
6-C Tin plate Glaze Flux		1-15-35	42.6	56.9	99.5	...	97	68	
		11-15-35	24.6	37.1	61.7	38.0	88	48	
7-C Tin plate Glaze Flux Water		1-15-35	42.6	56.9	99.5	...	97	68	
		11-15-35	37.1	49.1	66.2	13.4	96	61	



Odocene

For FLY Sprays

ODOCENE is an entirely new type of fly spray odor, having a clean, refreshing scent that is universally pleasing.

The remarkable covering power of Odocene makes its use particularly desirable where economy without sacrifice of odor is paramount.

Make your own tests with Odocene and be convinced of its superiority.

PRICE

\$2.50 per lb.

SAMPLES

Sample furnished upon request, together with full information.

PERFUME SPECIALISTS

We specialize in perfume odors for all purposes.

Write us regarding your problems—
We can help you!

There is no substitute for experience.

AROMATIC PRODUCTS, INC.

15E. 30TH ST. NEW YORK CITY -- FACTORY - STAMFORD, CONN.

was colorless. When the ten month period had passed this spray lost 38% in pyrethrin content and the kill had dropped from 68% to 48%.

The last sample (No. 7-C) contained 1% each of tin plate, flux, glaze and water. This combination did not cause as much trouble as was anticipated. At the end of the ten months' storage period there was a slight color loss and chemical analysis showed a loss in pyrethrin content of 13.4%. The killing power dropped from 68% to 61%.

Another series of standardized pyrethrum fly sprays was set up containing strips of each of the following metals: zinc, tin, aluminum, copper, lead, iron, and tin and lead in combination. Each strip measured $\frac{1}{4}'' \times 3''$. A strip of metal was weighed and placed in the experimental sprays which were then stored in sealed flint glass flasks in the dark for fourteen days. A control sample was set aside from the same batch of fly spray as that being subjected to the metals. The control spray (M) showed no loss at all during the two weeks period.

After the two weeks storage each spray was examined chemically and biologically and each piece of metal was removed from the spray, washed with methyl alcohol and again weighed. The sprays containing tin, aluminum, iron and zinc underwent no deterioration and showed no color change. The strips of metals in these four samples lost no weight.

The sample (No. 11-M) containing the strip of copper appeared greenish in color and lost 13% of its original pyrethrin content. The strip of copper itself decreased in weight 15/100ths of 1%. There was a noticeable sedimentation.

The sample (No. 13-M) containing a strip of lead appeared hazy after one day and deteriorated 8% in pyrethrin content after fourteen days. The lead lost 4/10th of 1% of its original weight. In this sample there was a heavy black deposition after the two weeks storage.

Another sample (No. 12-M) which contained a strip of both tin and lead acted similarly to the sample with lead alone. After one day storage the spray became cloudy and sedimentation had already commenced. After two weeks this condition was intensified and upon chemical analysis the spray was found to have lost 7% in pyrethrin content. The tin showed no loss at all and the lead lost 39/100th of 1% in weight.

From the results of these experiments with container ingredients and metals, the most destructive element was the confectioner's glaze. One per cent by weight of this material caused a 41.5% deterioration of the fly spray. Whether or not one per cent was a fair amount to use is problematical, but some metal containers brought to our attention seemed to be contaminated with more than this amount. The most apparent and serious color changes took place in the sprays "doctored" with the glaze. Used alone it caused a green coloration. With tin plate it caused red-brown coloration and in combination with tin plate and flux it caused a total color loss. With each color change there was a severe loss in toxicity of the spray.

The deterioration caused by the flux was by no means as great as that of the glaze. Where the flux was used alone or with tin plate there were no color changes. The spray so treated, however, showed a slight color loss.

It perhaps may seem strange that the sample (No. 6-C) treated with tin plate, glaze and flux deteriorated practically three times more than the spray (No. 7-C) treated with these same ingredients plus 1 per cent of water. The only explanation of this, is that the water settled in a layer between the spray and the other ingredients. Consequently except when the spray was shaken the glaze and flux did not come into contact with the pyrethrum. The principal cause for the 13% loss in toxicity in this case, then, was the water.

A comparatively small amount of study has been devoted to the effect of various metals on pyrethrum fly sprays. Gnadinger, in his publication "Pyrethrum Flowers" (page 171), has found that copper and zinc cause the formation of a greenish color when brought into contact for a period of time with pyrethrum fly sprays. Louis Bake reports, in

the November issue of SOAP (page 111), that lead, solder, zinc and copper lost weight in the presence of pyrethrum extracts for as short a period as two weeks.

Our investigation has shown that apparently there is no relation between the loss of weight of copper or lead and the extent of deterioration of pyrethrum sprays to which they are subjected. Copper lost relatively less than did lead, but the damage done by the former was considerably more than the latter. It can definitely be concluded that copper and/or lead in any form (i. e. brass, solder, etc.) are decidedly injurious to pyrethrum fly sprays. Two weeks storage is in our opinion too short a time to determine definitely whether the other metals investigated (i. e. zinc, iron and aluminum) would have harmful effects on pyrethrum fly sprays, and we are, therefore, continuing this investigation over a longer period. It has been established by others that zinc will cause pyrethrum extracts to become green in color.

TABLE NUMBER TWO THE EFFECT OF METALS ON PYRETHRUM FLY SPRAYS

Sample Number	Metal Used	$\frac{1}{4}'' \times 3''$	Weight of metal grams	Grams per 100 cc			% Decomposition (Chemical)	% Down 10 mins.	% Kill 24 hrs.
				Date	Pyrethrin I	Pyrethrin II			
M Control ..				11-18-35	45.0	55.2	100.2	..	98 68
				12- 2-35	45.0	55.2	100.2	..	98 68
8-M Zinc 0.9154				11-18-35	45.0	55.2	100.2	..	98 68
				12- 2-35	45.0	55.2	100.2	..	98 68
9-M Tin 1.1912				11-18-35	45.0	55.2	100.2	..	98 68
				12- 2-35	45.0	55.2	100.2	..	98 68
10-M Aluminum 1.3258				11-18-35	45.0	55.2	100.2	..	98 68
				12- 2-35	45.0	55.2	100.2	..	98 68
11-M Copper 3.6958				11-18-35	45.0	55.2	100.2	..	98 68
				12- 2-35	39.0	47.9	66.9	13	97 60
13-M Lead 9.5432				11-18-35	45.0	55.2	100.2	..	98 68
				12- 2-35	41.3	50.8	92.1	..	97 63
14-M Iron 5.7968				11-18-35	45.0	55.2	100.2	..	98 68
				12- 2-35	45.0	55.2	100.2	..	98 68
12-M Tin 1.1696				11-18-35	45.0	55.2	100.2	..	98 68
				12- 2-35	45.0	55.2	100.2	..	98 68
Lead 9.0696				11-18-35	41.9	51.0	92.9	7	96 62
				12- 2-35	41.9	51.0	92.9	7	96 62

Our investigation has shown that tin containers whose interiors are free from an excess of confectioner's glaze, flux, copper, lead, or lead solder may be safely used by the manufacturer for the packaging of pyrethrum fly sprays. Therefore, unless the manufacturer carefully selects the proper metal container, he has no assurance of the stability of his product after it leaves his hands.

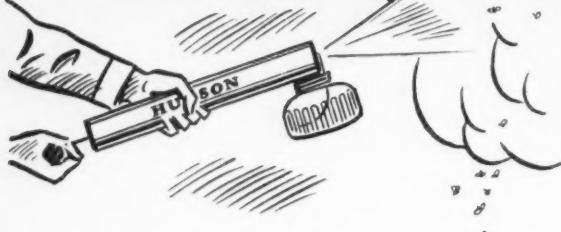
Standard Exterminating Co., formerly located at 6313 N. Clark St., Chicago, is now located at 1447 W. Monroe St.

Chipman Chemical Company, Bound Brook, N. J., insecticides and fungicides, has appointed Charles Dallas Reach Company, Newark, to direct its advertising account.

Engaged in the manufacture of an alleged rat and roach exterminating powder, *Walter E. Perry, trading as Bestyet Products Company*, Burlington, N. C., stipulates that he will desist from using in advertising or on labels the assertion that his product kills rats or mice and leaves no odor, or other representations of similar import or meaning, when this is not true.

HUDSON SPRAYERS

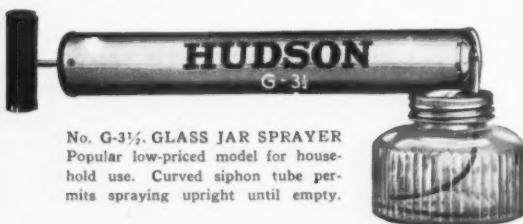
make it carry to make it kill!



What's the good of any insecticide if it doesn't go where it's supposed to? Application is just as important to good results as is the product itself.

That's where Hudson Sprayers make a big difference. They give you complete break-up of spraying materials—a finely atomized mist that is lighter, travels farther. Every Hudson Sprayer is designed with one purpose in mind—to give you the greatest killing power with the greatest carrying power! That's why they're demanded by thousands of your customers.

Be sure that all your customers get the utmost value out of your product. Supply them with Hudson Sprayers when you sell them! The complete Hudson Line includes sprayers of every size and type for household or outdoor use. Let us help you select the right one for your purpose.



No. G-3½. GLASS JAR SPRAYER
Popular low-priced model for house-
hold use. Curved siphon tube per-
mits spraying upright until empty.

H. D. HUDSON MFG. CO.
589 E. ILLINOIS STREET, CHICAGO, ILL.



CRESOL U. S. P.

Always uniform in distillation range and composition, you can be sure of the uniform solubility of your Cresol Compound when using Barrett Standard Cresol U. S. P. Also, the Cresol Compound will always contain less than 5% Phenol, thereby falling well within the limitations of the Federal Caustic Poisons Act.

TAR ACID OIL, 10% -- 75%

Carefully blended oils ranging in tar acid content from 10% to 75% for manufacture of animal dips and disinfectants.

CRESYLIC ACIDS

Ninety-nine per cent and 95% grades of various distillation ranges depending upon requirements.

PHENOL U. S. P.

Pure white crystalline products, 39.5° C. and 40° C. minimum melting points.

HYDROCARBON OIL

A neutral coal-tar oil for high efficient disinfectants.

SOLVENT NAPHTHA

Approximately 25° C. boiling range.

THE BARRETT COMPANY

40 Rector Street New York, N. Y.

Emulsion Floor Waxes

By RICHARDS JARDEN*
President, Franklin Research Co.

AS a manufacturer of water emulsion wax, I can very definitely state that there has been no one thing that has done more to confuse the manufacturer, the merchant and the user than the unfortunate classification of this product as "self polishing" or "no rub" wax. This rather spectacular "self polishing" feature has been played up from all angles to such an extent that it has overshadowed many other features, each one of equal or greater importance and this to the detriment of the product and the confusion of the average consumer.

May I offer as exhibit "A" in my case against this unfortunate and incorrect merchandising effort, the flap of an ordinary envelope? The glue here has dried to a much higher and more desirable gloss without polishing than will any brand of water emulsion wax I know of and consequently, if this "self polishing" feature was of such great importance, as many profess, then it would be decidedly in order that one should use such a glue as a maintenance material on his floors rather than a water emulsion wax.

But, you may, "that would be ridiculous," because everyone knows that if glue becomes damp or warm it becomes sticky and will therefore collect dirt and dust. Again, if glue becomes actually wet it becomes dangerously slippery and washes completely off the surface. Still again, if glue becomes really dry, it becomes brittle, thus losing its self-healing qualities, an item of great importance to a floor wax.

All of this is true, but gentlemen, there is not one but many, many brands of water emulsion wax on the market today that have every one of these bad qualities that we so readily recognize in glue, and we in our innocence have allowed the one redeeming feature—"self polishing"—to overshadow all of these faults.

I know this from both a practical and a technical standpoint. Practical, because in my field work I am in daily contact with brands of water emulsion wax that have these unfavorable characteristics in a very noticeable way; technically, because it was but a few months ago that I had our Laboratory make a series of tests on twenty-seven (27) different brands of water emulsion wax to uncover such necessary requirements as:—

- 1—Chemical composition: In as far as assurance against damage to the floor is concerned, and to assure acceptance or approval by the nationally known manufacturers of floor covering.
- 2—Toughness of film: This to denote wearing quality.
- 3—Water resistance: Ability to withstand the normal damp mopping method of floor maintenance.
- 4—Balance of film: This meaning a balance between that film which is so hard that it is brittle and lacks self-healing qualities, and that film which is so soft that it will track off the floor, mark easily and lack wearing quality.
- 5—Non-slip.
- 6—Gloss or self polishing feature.
- 7—Lack of surface tension: Or ability to lie smoothly on the floor.

These are the definite requisites of the satisfactory water emulsion wax. These are actual wax like characteristics, but it is a fact that this series of tests I spoke of uncovered more soap like characteristics and more glue like characteristics in this group of twenty-seven (27) brands than it did wax like characteristics.

Our method was to give each one of these actual requirements a certain rating so that the total reached one

hundred (100) points. In other words, toughness of film was graded at 15 points, water resistance at 20 points, balance of film at 15 points and so on to a total of 100 points. On examining a particular brand for water resistance and finding that it had good water resistance, we gave the brand 20 points on that score, if its water resistance was fair, it received 15 points and if poor, 1-3-5 or 7 points, as the case warranted.

The result of these tests was amazing in that we found one wax rated as low as thirteen points against another wax rated at 97. We found but four products out of the 27 worthy of a rating of 70 or more, and remember gentlemen, that 70, in our school days, was merely a passing mark. The majority of these brands rated from forty to sixty, with a rough average slightly below fifty.

With this information before me, I know without a question of a doubt that there is a great deal of misunderstanding, or let us say, lack of understanding about water emulsion wax in the field and I contribute this unfortunate condition more to the merchants of waxes than I do to either the manufacturer or the consumer.

I can visualize a manufacturer willing to make most anything that someone will buy from him and I can visualize a consumer as an innocent by-stander, willing to accept the word of the merchant insofar as quality is concerned and for that reason being misled without actually being at fault himself, but I cannot visualize a merchant willing to place his time, effort and money behind any product before he has completed a definite comparative test that in itself would assure him that he was prepared to offer to his customer, real quality.

If it were necessary for one to have a technical background to understand the difference between wax like characteristics and soap or glue like characteristics, there might be some excuse for this great confusion that exists in the water emulsion wax business, but frankly, there is no manufacturer of wax, or merchant of wax, or consumer of wax who does not realize just what the actual requirements of such a product amount to, and the only reason I can find for the confusion is the fact that all of these business men have allowed the one spectacular "self polishing" feature to completely shut their eyes to these many other requirements, each one of which is as important, and in some cases more important, than is the "self polishing" feature.

I say these other requirements are of a great or greater importance than the "self polishing" feature, and I mean exactly that, for if we were comparing two brands of wax and one of these brands presented a slightly less desirable gloss than the other, it is a fact that this could be very quickly equalized by the use of a polishing machine, or for that matter, the traffic of feet over the area and the nightly sweeping of the surface would automatically equalize the gloss within forty-eight (48) hours, but, if one of these brands were lacking in water resistance qualities or in toughness of film or in balance of film, there positively would be no way of correcting the item, and therefore, I repeat that these other features are of greater importance than this one "self polishing" feature that we have allowed ourselves to consider as prominent.

Please do not misunderstand me and feel that I do not recognize the advantage in having a floor wax that will dry to an original luster, and for that reason deserve the classification of "self polishing," but please do understand that this is but one of seven very definite merits that must be built into such a product, if it is going to be truly an economical floor maintenance material.

*Address before 22nd annual meeting, Natl. Assn. Insecticide & Disinfectant Mfrs., New York, Dec., 1935.



Other Washburn Floor Products:

PENETRATING SEAL BASE
TREAD PROOF SEALER
LIGHT MOPPING VARNISH
HEAVY MOPPING VARNISH
ALL AMERICAN GYM FINISH
BURNLESS GYM FINISH
MAGIC LUSTRE WATER WAX
CRYSTAL SEAL
(for concrete and terrazzo floors)

All of these Washburn products are described in our new 52 page publication "Modern Floor Maintenance." Gives complete instructions for the care of all types of floors. Write for a copy.

Increased Profits!

Satisfied Customers!

Jobbers are finding that Washburn's

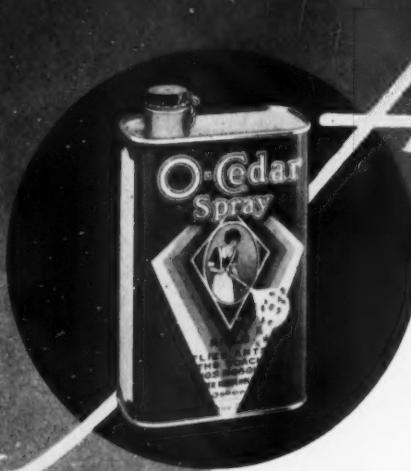
PENETRATING SEAL

will give their customers correct modern floor maintenance.

Penetrating Seal not only satisfies the school or institution where wax can be used for maintenance but also opens a new field for you in private or public buildings where wax cannot be used.

Penetrating Seal is the only sealer that operates satisfactorily with or without the wax finish. It is alkali-proof, water proof, and non-slippery; penetrates deeply, dries in one hour, and leaves no surface film.

T. F. WASHBURN CO.
2244 ELSTON AVE. CHICAGO



If it's a
GENERAL CAN
it's a
DEPENDABLE
CAN

*A Can is known
by the Company it keeps*

. . . or perhaps more correctly stated "by the contents it keeps". If your product is a quality retail consumer item or of a nature calling for modern presentation—you will want to choose the can with a silent recommendation. This modern, sturdy and convenient GENERAL CAN will deliver the goods for you, elevate the standard of your product on the dealers' shelf and permit added convenience in the hands of the consumer. Write today for further information and prices on this up-to-the-minute package.

GENERAL CAN COMPANY
CANAL at SIXTEENTH STREET · CHICAGO ILLINOIS

Again, please do not feel that I am building up a defense against a shortcoming in the particular brand of water emulsion wax that my company is manufacturing, by refusing to give to this spectacular "self polishing" or "no rub" feature any more importance than it deserves or by allowing this one feature to close my eyes to the seven other important features of such a product, for it is a fact that my brand will dry to just as high a lustre and probably to a higher lustre without polishing than will any other brand I know of, but if you have noted any of our advertising or listened to any of our sales presentations, you will agree that we keep this feature in its place.

I cannot help but feel that the man who does over-emphasize this one feature, does so because he either lacks an understanding of his product or because his product itself is lacking in one or more of those other equally important features and I very frankly advise that you be wary of the man who can find so little merit of a general type in his product that he must fall back on elementaries and over-emphasize this spectacular "self polishing" feature.

In May and the August, 1935, issues of the magazine, SOAP, there were published two articles of mine, one having as its subject "How to Select and Judge a Water Emulsion Wax" and the other "The Application and Maintenance of Water Emulsion Wax." In the May issue, I covered each one of the true requirements of such a product in its turn and I dealt with each of these subjects in detail. I suggested in this May article, certain interesting and conclusive tests that anyone could make to uncover these seven important wax characteristics.

The most important of this group of tests is detailed on a piece of advertising matter gotten out by my company the Franklin Research Company, in the form of a 50 drop booklet. This booklet carries four shallow evaporating tins in which exaggerated films of four different brands of wax have been laid and it points out very definitely the great variation in the quality of these different films, insofar as toughness, wearing quality and water resistance are concerned.

Note for example that this first film is definitely soft and sticky, being similar in its characteristics to the warm and moist glue which we spoke about a few minutes ago, whereas film No. 2 is again soft and sticky but it has more of a soap like characteristic than either a glue or a wax. Again, we find this third film hard, brittle and shellac like, with absolutely no self-healing qualities, and for that reason similar to dry hard glue.

In the August issue of SOAP, where I covered "The Application and Maintenance of Water Emulsion Waxes" I pointed out some rather interesting sidelights on the subject of gloss, lustre or in other words the "self polishing" feature and I made it quite plain that any and all brands of water emulsion wax will dry to a different tone of lustre, depending upon the receptability of the surface to which they are applied. This is a very important point to keep in mind and it demonstrates above everything else that one should not undertake to judge between any two brands of water emulsion wax except on the basis of a definitely competitive test or demonstration and by a competitive test or demonstration I mean "side by side on the same surface at the same time."

So many times we find that a buyer has unconsciously favored one or another brand of wax in making his test, by unintentionally preparing or leaving a more receptive foundation for one brand than the other and this is particularly true in the case of the man who has been established in the use of one brand and who is about to consider a competitive brand.

It is logical to assume that a certain foundation of wax has been built up in the pores and on the surface of the floor through the past use of the established brand and that when a waxing period presents itself the owner of the floor surface will merely do that amount of cleaning that is necessary to remove the actual dirt from the surface, without taking off all of the foundation wax and

that he will apply his next coat of his standardized brand on top of a fair foundation.

Now, this man considers the use of a new brand and in all fairness to the salesman presenting this new brand, he prepares a certain area for the application and in doing so he does a more thorough than usual cleaning job, which results in his having taken off of the surface and in some cases actually taken out of the pores of the surface, all of the wax foundation that has been built up. He then applies the new brand to this less receptive surface with no foundation under it and naturally receives a two coat appearance against his regular area that probably has on it total of 4-5 or 6 coats of the established brand.

This is just one reason out of a dozen why one should very definitely insist that any test or any demonstration must be made side by side on the same floor at the same time with a competing product.

Any figures I would quote would probably be accepted by my average audience as great exaggerations, however, I will dare to quote some figures with the hope that by so doing I can point out still further the advantage of one having to do only with the product of definite and well balanced quality.

In November, 1935, issue of *Buildings and Building Management*, there was an article by Mr. Cheyney, Supt. of the Fidelity-Philadelphia Trust Bldg., which would be well worth one's while to read, for it points out some very interesting figures in connection with the cost of maintaining a floor with a good water emulsion wax. We find here that Mr. Cheyney is maintaining a total of 137,900 square feet of linoleum at a total cost of \$3,460.13, this being an average cost per square foot of about 2½c per year. Mr. Cheyney says, "of this total, labor costs are—\$3,168.48 and material cost but \$291.65." Now, he uses about twenty gallons of wax a month, say 240 gallons a year, and because of this quantity purchased and because of his key position as a buyer, he would be entitled to a price of approximately \$1.25 per gallon. This would figure out to approximately \$291.65.

We see here that the cost of the wax is but approximately 8 per cent of the total cost of floor maintenance, the other 92 per cent being labor charges. In other words, it costs twelve times as much for labor as it does for material. With these figures before us we can see how really short-sighted it is for one to take the least chance with the quality of the material for the sake of a saving of let us say as much as 25 per cent of the \$291.65, when by doing so he is liable to make a loss of an equal percentage against his labor charge of \$3,168.48. Note that if Mr. Cheyney had bought his wax at a 30c lower price per gallon, he would have saved but a total of \$75.00 during the whole year, and if his time is worth anything at all per hour, it would take but a very short time for him to spend this \$75.00, by fiddling around with different waxes of unproven quality, with the hope of finding one that might be a few cents cheaper per gallon.

Now to quote still more figures. One of the large industrial buyers on the Eastern Seaboard recently approached the situation from a different angle and discovered that he could afford to pay \$16.50 per gallon for one wax as against \$1.10 for another brand. These figures naturally take labor costs into consideration and above all, they point out the fallacy of a buyer's viewing the situation from the standpoint of per gallon cost alone. Still another angle of this price situation is presented by the experience of a school in the vicinity of Hartford, Conn. These people bought from us in June, 1934, two drums (110 gallons) of wax at \$1.50 per gallon with which they maintained their floors until the vacation period in 1935.

At that time the Board of Education insisted upon buying on open bid and they wrote up specifications calling not for an established brand but for Rubber-Gloss or an equal, with no knowledge as to how they should judge whether a brand was equal. They bought the usual two drums (110 gallons) for approximately 75c a gallon, thus

(Turn to Page 121)

KILLED without a clue!



Atlantic Ultrasene

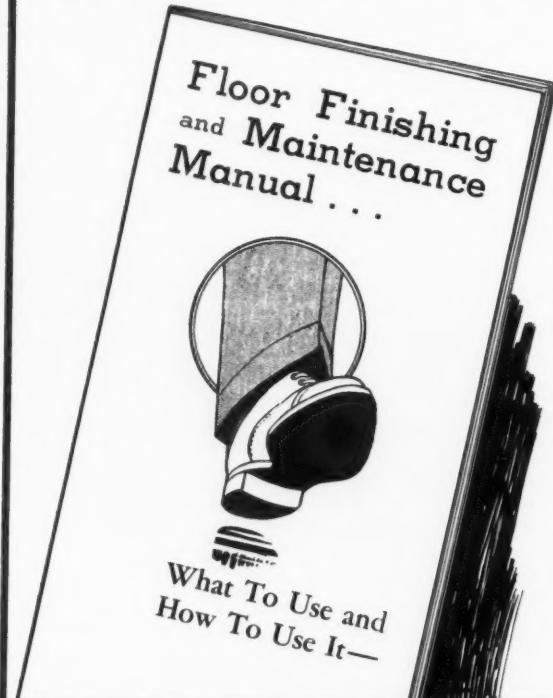
—A BETTER BASE FOR BETTER INSECTICIDES

When an insect is killed by an Ultrasene-base insecticide, there's no evidence. This new Atlantic petroleum product is highly refined for use as a carrier for insect killers. It has no objectionable kerosene odor to linger in rooms. Because of its uniformity, it evaporates quickly and does not leave an oily residue. It is colorless too—even more transparent than water. Add to these advantages the fact that Ultrasene is practically tasteless, and it is obvious why Ultrasene is a perfect base for insecticides, particularly those used where food is handled.

More and more insecticide manufacturers are using Ultrasene in the production of efficient, salable sprays. Why not send for a liberal experimental sample for your own tests? Our technical department is always glad to answer your questions or to help with your problems. Write to The Atlantic Refining Company, Specialty Sales Department, 260 South Broad Street, Philadelphia, Pa.

**ATLANTIC
ULTRASENE**

This Valuable Book will be sent FREE to Distributors and Manufacturers of Soaps, Chemicals, Disinfectants, etc.



It tells how to prepare and finish ALL KINDS OF FLOORS. Helps you solve floor problems in schools, public buildings, institutions, etc.

**SEND COUPON NOW
FOR YOUR FREE COPY**

----- COUPON -----

FEDERAL VARNISH CO.

Dept. 18—337 S. Peoria St., Chicago, Ill.
Kindly send without cost or obligation your

FLOOR FINISHING & MAINTENANCE MANUAL.

Name

Company

Address

City State

FEDERAL VARNISH CO.

INSECTICIDE-DISINFECTANT REGISTRATION

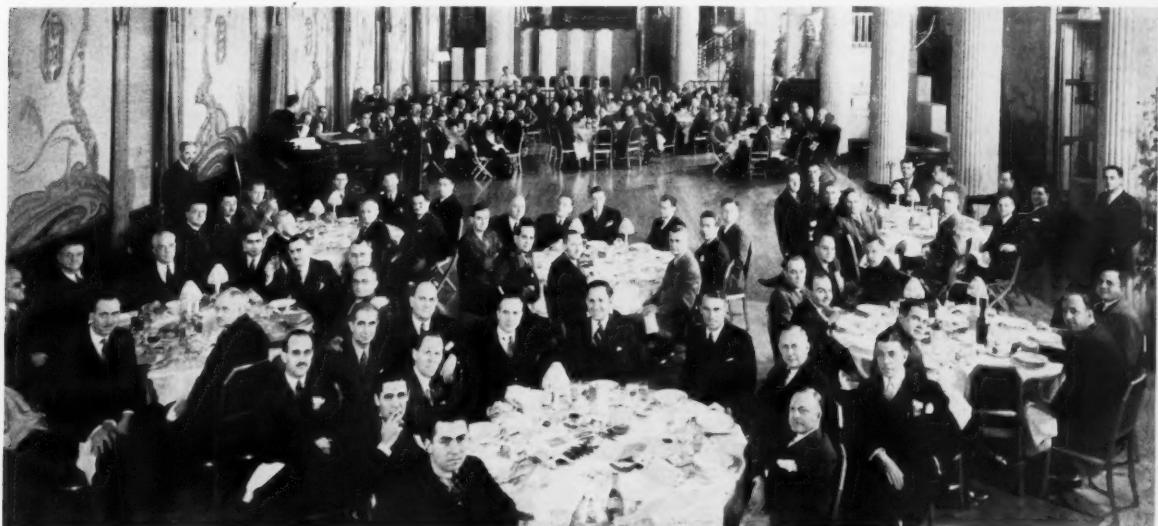
Official registration at the 22nd annual meeting of the National Association of Insecticide & Disinfectant Manufacturers at the Waldorf-Astoria, New York, last month, included the following firms and representatives:

Firm, Address and Representative

Acme Can Co., Philadelphia, Charles A. Beach.
Acmeine Mfg. Co., Traverse City, Mich., James T. Milliken.
Acmeine Mfg. Co., Traverse City, Mich., John L. Novak.
American Can Co., Baltimore, C. L. Lovell.
American Can Co., New York, G. W. Meier.
American Can Co., New York, Louis A. Trevisan.
American Druggist, New York, Harry H. Miller.
American Oil Co., Baltimore, Joseph Shapiro.
American Perfumer, New York, S. L. Mayham.
American Perfumer, New York, Howard Moore.
Aromatic Products, Inc., New York, E. I. Booth.
Aromatic Products, Inc., New York, Clifford L. Weston.
Aromatic Products, Inc., New York, Arthur W. Mudge.
Baird & McGuire, Holbrook, Mass., Campbell Baird.
Baird & McGuire, Holbrook, Mass., Gordon Baird.
Baird & McGuire, Holbrook, Mass., Harry W. Cole.
Baird & McGuire, St. Louis, Jack Varley.
Baldwin Laboratories, Saegertown, Pa., H. W. Baldwin.
Baldwin Laboratories, Saegertown, Pa., C. M. Gwin.
Barrett Company, New York, R. C. Quortrup.
Henry Carroll & Co., New York, J. N. Davies.
S. H. Bell Co., Pittsburgh, S. H. Bell.
Black Flag Co., Baltimore, J. Albert Talbot.
Black Flag Co., Baltimore, W. G. Griesemer.
Bakelite Corp., New York, T. J. Major.
Bobrick Dispenser Co., New York, M. B. Feinson.
Breuer Electric Mfg. Co., Chicago, Ill., A. A. Breuer.
Chemical Compound Corp., New York, Eugene Cohn.
Chemical Supply Co., Cleveland, Henry A. Nelson.
Clarkson Chemical & Supply Co., Williamsport, Pa., J. H. Bender.
Clifton Chemical Co., New York, Leonard B. Schwarcz.
Clifton Chemical Co., New York, Dudley J. Bachrach.
Colgate-Palmolive-Peet Co., Jersey City, N. J., J. H. Stephenson.
Continental Can Co., New York, W. F. Bredemeyer.
Continental Can Co., New York, O. G. Jakob.
Continental Can Co., New York, L. J. LaCava.
Continental Can Co., New York, P. A. Loofbourrow.
Continental Can Co., New York, E. J. O'Connor.

Firm, Address and Representative

Davies-Young Soap Co., Dayton, Ohio, R. H. Young.
Davies-Young Soap Co., Dayton, Ohio, Dr. R. B. Trusler.
Derris, Inc., New York, O. M. Poole.
Derris, Inc., New York, R. W. Birdsall.
Derris, Inc., New York, W. M. Boyd.
Derris, Inc., New York, E. Camson.
Derris, Inc., New York, F. Carrano.
Derris, Inc., New York, E. L. Dohlin.
Derris, Inc., New York, A. Hafner.
Derris, Inc., New York, R. Wotherspoon.
Dethol Mfg. Co., Inc., Washington, D. C., Frank G. MacAlon.
Dethol Mfg. Co., Inc., New York, J. H. Lawton.
C. B. Dolge Co., Westport, Conn., Irwin Steig.
Dougherty Mfg. Corp., Jersey City, N. J., William J. Anderson.
Dow Chemical Co., New York, Ralph E. Dorland.
Dow Chemical Co., New York, Alexander Leith, Jr.
Dow Chemical Co., New York, Robert L. Wilson.
P. R. Dreyer, Inc., New York, F. C. Theile.
E. I. du Pont de Nemours & Co., Inc., Wilmington, George J. Tombak.
E. I. du Pont de Nemours & Co., Inc., Wilmington, Frederick W. Wolff.
Expello Corp., New York, S. Judson Dunaway.
Federal Varnish Co., Chicago, John H. Lawson.
Franklin Research Co., Philadelphia, Richards Jarden.
Franklin Research Co., Philadelphia, W. J. LaRoche.
Frederick Disinfectant Co., Atlanta, F. A. Hoyt.
Fritzsche Brothers, New York, George L. Ringel.
Fritzsche Brothers, New York, B. F. Zimmer.
Fritzsche Brothers, New York, James J. Cummings.
Fritzsche Brothers, New York, James H. McNamara.
Fritzsche Brothers, New York, Charles Schneider.
Fuld Brothers, Baltimore, Melvin Fuld.
General Laboratories, Philadelphia, William A. Hadfield.
General Naval Stores Co., New York, W. H. McArdle.
General Naval Stores Co., New York, R. J. Spitz.
Givaudan-Delawanna, New York, Robert A. Engel.
Givaudan-Delawanna, New York, Dr. Eric L. Kunz.
Givaudan-Delawanna, New York, R. M. Stevenson.
Givaudan-Delawanna, New York, George N. Warren.
H. K. Glover Co., New York, J. Clancy.
H. K. Glover Co., New York, A. H. Germert.
Gulf Refining Co., Pittsburgh, Wallace Thomas.
Gulf Refining Co., Pittsburgh, W. A. Simanton.
Hercules Powder Co., Chicago, G. F. Hogg.



The 22nd Annual Banquet of the Insecticide and Disinfectant Industries was held on the Starlight Roof of the Waldorf-Astoria.



MANY of the processes employed in the refining of coal tar products have been developed by the Koppers companies. A competent technical staff is constantly at work to introduce further process refinements and to insure the high quality of all Koppers products. The Koppers laboratories are abreast of all new developments in the field of coal tar products. Their services are at your command.

**TAR ACIDS
CRESOL, U. S. P.
PHENOLS
CRESYLIC ACID
98% to 100% STRAW COLOR
TAR ACID OILS
NEUTRAL HYDROCARBON OIL**

(For construction and maintenance, Koppers also produces: Roofing, Waterproofing, Dampproofing, Creosote, Tar Base Paints and Coatings, and Tarmac for driveways, roads, pavements, etc.)

**KOPPERS PRODUCTS COMPANY
KOPPERS BUILDING, PITTSBURGH, PA.**

Offices:

New York, Boston, Providence, Chicago, Birmingham, San Francisco
Plants: Birmingham, Ala.; Buffalo, N. Y.; Chicago, Ill.; Follansbee, W. Va.;
Fort Wayne, Ind.; Hamilton, O.; Kearny, N. J.; Milwaukee, Wis.;
New Haven, Conn.; Providence, R. I.; St. Paul, Minn.; St. Louis, Mo.;
Swedeland, Pa.; Utica, N. Y.; Youngstown, O.

BREUER'S TORNADO ELECTRIC SPRAYERS
gets you reorders because they are the most efficient and durable insecticide sprayers ever built. Supply your customers with the best.

**The New Tornado Model 36
Automatic Time Switch—Volume Air Control
One Gallon Capacity, 1-3 H.P. G. E.
Universal Motor**

Here is the finest sprayer ever built. Similar to the now widely used Tornado Model 54 and retaining the automatic time switch, volume air control and adjustable nozzle features, the new Model 36 will spray a big volume of insecticide great distances in finest gas formation.

The patented principle of heating and compressing material does the trick. Just the sprayer you need for covering large distances and penetrating with the finest gas every possible source of insect existence.

Get the facts on this sprayer before buying!



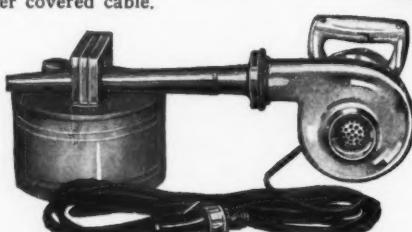
Also most complete line of electric sprayers to meet every spraying problem.

MODEL 54—

1 QT. CAPACITY
It features an automatic time switch set at any point from 1 to 30 minutes — sprays desired amount without any attention whatever — automatically shuts off. Can also be used for hand spraying. Adjustable nozzle can be set for spraying in any position. Also exclusive volume control adjustment permits spraying one ounce every two to four minutes with either fine or heavy spray. MODEL 53 same as Model 54 except does not have automatic time switch.



Model 50 Fan Type unit. A fine insecticide atomizer. Sprays distance of 8' to 10'. $\frac{1}{2}$ H.P. G.E. Universal Motor, 1 pint glass jar. 20' of rubber covered cable.



Model 6 Fan Type unit. Will break insecticide into a very fine mist. Sprays 18' to 20'. 1/3 H.P. G.E. Universal Motor. Norma Ball Bearings, 1 gallon metal container. This model is for larger institutions, warehouses, industrials, etc., and is also highly recommended for moth-proofing solutions. Write today for complete description and circulars.

BREUER ELECTRIC MFG. CO.

862 Blackhawk Street

Chicago, Ill.

We do not sell insecticides. Our business is manufacturing sprayers.

Patented in U. S. A. and Foreign Countries

Firm, Address and Representative

Hercules Powder Co., Wilmington, George C. O'Brien.
Hercules Powder Co., Wilmington, F. M. Thompson.
Hercules Powder Co., Wilmington, E. T. Wilander.
J. L. Hopkins Co., New York, Leonhardt.
H. D. Hudson Mfg. Co., New York, M. L. Harrison.
H. D. Hudson Mfg. Co., Chicago, Paul F. Loris.
H. D. Hudson Mfg. Co., Chicago, R. E. Streckenbach.
Huntington Laboratories, Huntington, Ind., J. L. Brenn.
Koppers Products Co., Pittsburgh, James H. Carpenter.
Lambert Pharmacal Co., St. Louis, G. F. Reddish.
Lehn & Fink, Bloomfield, N. J., Dr. Emil Klarmann.
Lehn & Fink, New York, J. J. Reiner.
MacNair Dorland Co., New York, Grant A. Dorland.
MacNair Dorland Co., New York, W. E. Dorland.
MacNair Dorland Co., New York, Ira P. MacNair.
MacNair Dorland Co., New York, Charles Southern.
MacNair Dorland Co., Chicago, Thomas Morgan.
Magnus, Mabee & Reynard, New York, M. Stanley Barker.
Magnus, Mabee & Reynard, New York, W. F. Fischer.
Magnus, Mabee & Reynard, New York, J. B. Magnus.
Magnus, Mabee & Reynard, New York, P. C. Magnus.
Mass. Inst. Technology, Cambridge, Mass., Dr. Samuel C. Prescott.
Merk & Co., Inc., Rahway, N. J., Peter Dougan.
Monsanto Chemical Co., New York, Frank E. Byrne.
Monsanto Chemical Co., New York, E. Schuler.
Monsanto Chemical Co., Akron, Ohio, R. C. Whitman.
Monsanto Chemical Co., New York, V. C. Williams.
McCormick & Co., Baltimore, A. E. Badertscher.
McCormick & Co., Baltimore, John N. Curlett.
McCormick & Co., Baltimore, L. W. Jones.
McCormick & Co., Baltimore, Fletcher Long.
McKesson & Robbins, New York, Charles Hermann.
McLaughlin Gormley King Co., Minneapolis, Chester F. Hogh.
McLaughlin Gormley King Co., New York, P. E. Falkingham.
McLaughlin Gormley King Co., New York, R. F. Joyce.
McLaughlin Gormley King Co., Minneapolis, J. V. Miller.
National Can Co., New York, C. M. Blickman.
National Can Co., New York, C. S. Humphrey.
National Can Co., New York, S. H. Morris.
National Can Co., Chicago, R. S. Solinsky.
N. Y. State Board of Pharmacy, Albany, N. Y., W. G. Mathers.
Niagara Alkali Co., New York, William J. Weed.
O'Connor & Kremp, New York, R. F. Kremp.
O'Connor & Kremp, New York, J. R. O'Connor.
O'Connor & Kremp, New York, J. T. O'Connor.
Oil, Paint & Drug Reporter, New York, T. S. McCarthy.
John Opitz, Inc., Long Island City, Charles Opitz.
Pease Laboratories, New York, John E. Dowd.
Pease Laboratories, New York, William Sartori.
Pease Laboratories, New York, A. Lloyd Taylor.
S. B. Penick & Co., New York, D. C. Beach.
S. B. Penick & Co., New York, Harry Craven.
S. B. Penick & Co., New York, Dr. Thomas Lewis.
S. B. Penick & Co., New York, Clayton McCook.
S. B. Penick & Co., New York, Harold Noble.
S. B. Penick & Co., New York, F. F. Rauch.
Pennsylvania Refining Co., Butler, Pa., A. B. Weingard.
Phinotis Chemical Co., New York, P. J. Walsh.
Postal Telegraph, New York, P. O. Morningstar.
John Powell & Co., New York, G. R. Rinke.
John Powell & Co., New York, Robert C. Kelly.
John Powell & Co., New York, John S. Powell.
John Powell & Co., New York, David Hoyer.
John Powell & Co., New York, Dr. M. Leonard.
John Powell & Co., New York, Dr. A. Weed.
John Powell & Co., Pittsburgh, Charles Campbell.
R. J. Prentiss & Co., New York, Harold R. King.
R. J. Prentiss & Co., New York, Richard J. Prentiss.
R. J. Prentiss & Co., New York, R. W. Stoddard.
Pyrend Mfg. Co., Newark, N. J., H. Friedauf.

Firm, Address and Representative

Reefer-Galler, Inc., New York, M. S. Galler.
Reilly Tar & Chemical Corp., New York, W. G. Hirschfeld.
Reilly Tar & Chemical Corp., New York, P. C. Reilly, Jr.
Reilly Tar & Chemical Corp., Chicago, J. L. Tildsley, Jr.
Rex Research Corp., Toledo, H. W. Moburg.
Rex Research Corp., Toledo, E. H. Rude.
Rex Research Corp., Pittsburgh, Dr. F. Hedenburg.
Rochester Germicide Co., Boston, H. W. Drury.
Rochester Germicide Co., Rochester, W. B. Eddy.
Rochester Germicide Co., New York, J. A. Walsh.
Rohm & Haas Co., Philadelphia, L. L. Isenhour.
Rohm & Haas Co., Bristol, Pa., D. F. Murphy.
H. H. Rosenthal Co., New York, H. Bercow.
Selig Co., Atlanta, S. S. Selig.
Shell Petroleum Co., St. Louis, Hugh R. Berry.
Sherwood Petroleum Co., Brooklyn, Julius Fletcher.
Sherwood Petroleum Co., Brooklyn, Wm. F. Kroneman.
Sherwood Petroleum Co., Brooklyn, H. C. Osgood.
Sinclair Refining Co., New York, Walter Andree.
Sinclair Refining Co., New York, William E. Bohlen.
Sinclair Refining Co., New York, Charles J. Dumard.
Sinclair Refining Co., East Chicago, Ind., W. J. Gothard.
Sinclair Refining Co., Chicago, F. O. Huckins.
Skinner & Sherman, Inc., Boston, Burton G. Philbrick.
Solarine Co., Baltimore, James F. Beatty.
L. Sonneborn Sons Co., New York, P. Berman.
L. Sonneborn Sons Co., New York, R. W. Bjork.
L. Sonneborn Sons Co., Chicago, E. E. Brand.
L. Sonneborn Sons Co., New York, A. J. Kelly.
L. Sonneborn Sons Co., New York, Dr. Erich Meyer.
L. Sonneborn Sons Co., New York, W. Stiles.
L. Sonneborn Sons Co., New York, John C. Wolke.
Stanco, Inc., Elizabeth, N. J., Franklin C. Nelson.
Stanco, Inc., New York, W. J. Zick.
Standard Oil Co., Cleveland, R. O. Cowin.
Tanglefoot Co., Grand Rapids, Mich., B. E. Kuyers.
Tanglefoot Co., Grand Rapids, Mich., William J. Wagner.
Topics Publishing Co., New York, Philip H. Van Itallie.
Topics Publishing Co., New York, E. D. Odell.
Topics Publishing Co., New York, Russell Boland.
Tunis Chemical Co., Kennett Square, Pa., R. W. Tunis, Jr.
United Clay Mines Corp., Trenton, N. J., K. E. Ward.
U. S. Chamber of Commerce, Washington, D. C., Arthur D. Smith, Jr.
U. S. Chemical Co., Greenville, Ohio, V. W. Mider.
U. S. Dept. Agriculture, Silver Spring, Ind., W. S. Abbott.
U. S. Dept. Agriculture, Washington, D. C., R. C. Roark.
U. S. Dept. Agriculture, Beltsville, Md., F. L. Campbell.
Van Ameringen-Haebler, New York, A. L. Van Ameringen.
Vestal Chemical Co., St. Louis, F. J. Pollnow.
Vick Chemical Co., Greensboro, N. C., C. L. Black.
West Disinfecting Co., Long Island City, Chas. Auerbach.
West Disinfecting Co., Long Island City, William Dreyfus.
West Disinfecting Co., Long Island City, James E. Marcuse.
West Disinfecting Co., Long Island City, John A. Marcuse.
Robert C. White Co., Philadelphia, Robert C. White.
Robert C. White Co., Philadelphia, Robert C. White, Jr.
White Tar Co. of N. J., Inc., Kearny, N. J., H. W. Hamilton.
John H. Wright, New York, John H. Wright.

Clifford L. Iorns of St. Louis, representative in the Mid-West for Ungerer & Co., New York, and other firms, spent the week of Jan. 2 in New York visiting his principals and making his headquarters with Ungerer.

The annual "5 and 10" packaging contest and exhibition sponsored by the *Syndicate Store Merchandiser* is being held in the exhibition galleries of the RCA Building, Rockefeller Center, New York, January 16-18.



Uncle Sam Says:

SATIN GLOSS FLOOR WAX IS
SUPERIOR TO OTHER WAXES

BEST BY TEST

Metal Polish
Non-Rubbing Wax
Deodorizing Blocks
Urinal Cakes
Fly Sprays
Moth Preventives
Furniture Polish
Prepared Wax Polish
(Liquid and Paste)



IT GIVES A BRILLIANT
DURABLE SURFACE
PROTECTION.

Is recommended for all types of
flooring.

Linoleum	Asphalt Base	Varnished
Inlaid	Terrazzo	Painted
Cork	Rubber	Shellacked

WRITE FOR SAMPLE AND PRICES

THIS PRODUCT CAN BE SUPPLIED
In bulk or put up under your own brand.

UNCLE SAM CHEMICAL CO., INC.

Manufacturers for the Jobber

329 EAST 29th STREET, NEW YORK, N. Y.

Established 1915

SPECIFICATIONS — clearly indicate
the degree to which an oil has been refined

N O N O D R

Is sold upon definite specifications and we invite tests
and comparisons by any and all recognized authorities.

MADE RIGHT

PRICED RIGHT

O'CONNOR & KREMP

Sole Agents

11 WEST 42nd STREET

NEW YORK, N. Y.

SOLINSKY JOINS NATIONAL CAN

Robert S. Solinsky has become associated with the National Can Co. as assistant vice-president in charge of Mid-West sales. Mr. Solinsky was previously for twenty-five years connected with the Continental Can



Robert S. Solinsky



Louis M. Blickman

Co. at Chicago, and is widely known in the insecticide, disinfectant, and sanitary products industries. He has announced the establishment of a new Mid-West sales headquarters of the National Can Co. in suite 3515 of the new Field Building, Chicago. National Can also has announced that Louis M. Blickman has been appointed assistant sales manager for the New York metropolitan area. He has been associated with the company for the past 23 years.

Masco Chemical Co., Brooklyn, announce that their no-rub wax and their metal polish have been approved by the Bureau of Steamboat Inspection for transportation and use as stores on passenger vessels without restriction.

S. B. Penick, Jr., vice-president of S. B. Penick & Co., New York, is the father of a daughter, now almost two months old, Mary Alice Penick.

H. J. Ahles and David Lynch of the Ahles organization, Chicago, representatives in the Mid-West for John Powell & Co., New York, and A. A. Stillwell & Co., New York, returned to Chicago Jan. 10 after two weeks spent with their principals in New York.

S. & G. Products Co., with headquarters at 3731 W. Euclid Ave., Detroit, has recently been formed by Casper Stern to manufacture insecticides, detergents, polishes, floor waxes, soaps, etc.

The Chicago office of L. Sonneborn Sons, Inc., is now in new quarters at 400 West Madison St. in the Chicago Daily News Building.

"Moth Wool", a moth destruktant, will be the first product of Baltus Rolfs, Inc., recently organized in West Bend, Wis. The product will be nationally advertised.

EXTERMINATORS SEE DEATH RAYS

A number of individuals representing firms in the exterminating field were guests of the Westinghouse Lamp Co. at its plant at Bloomfield, N. J., last month, and had an opportunity to see in operation some of the new type ultra-violet lamps which have been developed by this concern over the past few years for control of bacteria and fungi. The meeting was arranged by N. K. Cannon of the Professional Exterminators Association.

The lamps are made in various forms, one of which closely resembles the ordinary 60 watt incandescent light bulb. The interesting feature of these lights is their ability to produce what might be termed ultra-violet radiation with wave lengths as low as 1800-1900 Angstrom Units. The work is in charge of Dr. Rentschler and Dr. James who have obtained many interesting and valuable results. They have shown that these low wave length radiations kill bacteria and fungi readily. Experimental commercial size units have demonstrated that it is feasible to use these radiations for the sterilization of drinking glasses, the killing of fungi on baked goods, and on meat, and it seems probable that these lights have valuable therapeutic uses as well.

Insects confined before this radiation are killed, the investigators report, but they express some doubt as to how far into the field of extermination the use of ultra-violet radiations can be extended. There has been some interesting speculation, however, on the possibility in the future of the development of induced radio-activity of sufficient intensity to make it useful as a means of insect control.

A sharp protest by Secretary William O. Buettner of the National Association of Exterminators and Fumigators against the activities of relief workers and other Government agencies in local rat extermination work has been sent to President Roosevelt. He protests against the unfair competition and the effect on employment among exterminators and fumigators.

A questionnaire asking for information on liability insurance policies has just been mailed to firms in the exterminating and fumigating industry by the National Association of Exterminators and Fumigators. The association is seeking to collect this information prior to presenting its case to the National Bureau of Casualty & Surety Underwriters for lower rates on exterminating and fumigating liability policies. Every firm in the industry is urged to fill out and mail a questionnaire to the secretary of the national association, William O. Buettner, 3019 Ft. Hamilton Parkway, Brooklyn.

Dr. Robert C. White, Robert C. White Co., Philadelphia, has been named Controller of the City of Philadelphia by the newly inducted Mayor Wilson. In the recent election Dr. White headed a committee of 1,000 business men to work for the election of Mr. Wilson.

YOUR 1936 SOURCE OF SUPPLY

DISINFECTANTS A N D INSECTICIDES

We offer every opportunity to the jobber of Sanitary products to increase profits during 1936. The complete "Chemco" line enables the jobber to deal with one large responsible concern that can give the needed advantage in quality, quantity and service at lowest cost. Private label service and drop shipments under the jobber's name, brand and bills of lading. Write us of your needs and let us explain how we plan to help you to larger sales and greater profits during 1936.

THE CHEMICAL SUPPLY COMPANY
2450 CANAL ROAD
CLEVELAND, OHIO

"Your most logical and economical source of supply"

R COAL TAR PRODUCTS

*For the
Soap and Disinfectant Industry*

CRESOL
CRESYLIC ACID
CRESOL U.S.P.
XYLENOL
TAR ACID OILS
NAPHTHALENE

REILLY TAR & CHEMICAL CORPORATION

Executive Offices Merchants Bank Building, Indianapolis, Indiana
2513 SO. DAMEN AVENUE, CHICAGO, ILLINOIS 500 FIFTH AVENUE, NEW YORK, N.Y. ST. LOUIS PARK, MINNEAPOLIS, MINN.

FOURTEEN PLANTS TO SERVE YOU

DEBATE INSECTICIDE SPECIFICATIONS

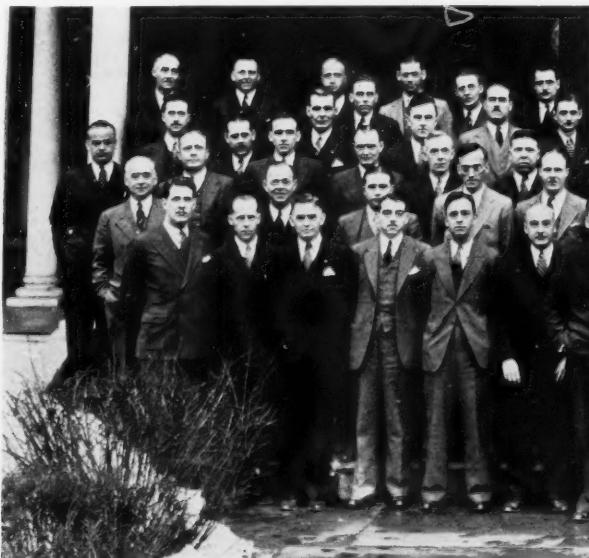
(From Page 93)

In reporting for the antiseptic committee, Dr. George F. Reddish of the Lambert Pharmacal Co., St. Louis, criticized severely the Allen method of testing antiseptics and called attention to the fact that data obtained by the use of this unaccepted method are apt to be deceptive. He deplored the wide circulation which certain consumer advisory organizations have given to such data.

Other important items on program included a floor discussion on the hiring and training of salesmen, in which both Simon S. Selig, The Selig Co., Atlanta, and J. L. Brenn, Huntington Laboratories, Huntington, Ind., reported on their own experiences in handling salesmen. Another paper which attracted much interest was presented by David Hoyer, John Powell & Co., New York, dealing with the deterioration caused in pyrethrum sprays by certain metals, glazes, and lacquers present in tin containers. Richards Jarden, of Franklin Research Co., Philadelphia, discussed water emulsion waxes in an interesting paper delivered at the final session. He called attention to the fact that in emphasizing the "no-rub" features of their floor waxes in recent years, many sellers of these products may be giving this feature undue emphasis and overlooking the fact that there are at least six other qualities which are of equal importance.

The meeting closed with the annual informal dinner given on the Starlight Roof of the Waldorf-Astoria. A floor show followed the dinner, with much of the talent coming from the newly opened Broadway night club, "Connie's Inn."

Richard System, Inc., has moved offices from 357 Bridge St., to 6 Kaynor St., Springfield, Mass.



Baldwin Laboratories, Inc., Saegertown, Penna., manufacturers of *Dwin* insecticides, and other specialties, held its annual sales convention at the Bartlett Hotel, Cambridge Springs, Penna., on January 2 and 3. Fifty

JOHN WRIGHT EXPANDS OFFICES

John H. Wright, technical consultant to manufacturers of disinfectants, insecticides, proprietary medicines, and associated products, and secretary of the National Association of Insecticide and Disinfectant Manufacturers, has moved his offices and laboratories to much larger space on the 19th floor of the Chanin Building, 122 East 42nd St., New York. The office of the national association has been moved there also in conjunction with the offices of Mr. Wright. Several persons have been added to the Wright laboratory staff. Mr. Wright, formerly vice-president and technical director for the Zonite Products Corp., specializes in new products, patents, labelling, formulas, and advice under state and federal laws.

The largest termite-damage replacement job yet recorded is stated to be the Commonwealth Pier, Boston, where a contract has just been let to the Merritt, Chapman & Scott Co., New York, for \$719,000 for complete replacement of the under-structure of the pier which is badly undermined by termites. Especially treated termite-proof timber will be used in the reconstruction.

Weston Exterminator Co., Fort Wayne, Ind., has taken Kenneth Ember into the firm as a partner in charge of its production activities.

Universal Antiseptic & Research Laboratories has been organized recently in Bristol, Tenn., by C. Marion Jefferson, E. H. DuBose, A. J. Higgins and T. H. Morris.

The George W. Rockwell Exterminating Co. has re-located recently at 1234 Oak St., Kansas City, Mo.



persons attended the meeting which closed with a banquet on Jan. 3, at which a hundred persons were present. Ward Baldwin, president of the firm, presided at the meeting.

Keep Your TRADE-MARK ALIVE

With
BENETCO
Lithographed
STEEL
CONTAINERS



These Modern Steel Containers carry your products safely and economically to your customers—provide a convenient and practical dispensing package—and build added prestige for your product.

Your label lithographed in colors on these modern Steel Containers keeps your Brand-name constantly on display before actual users and prospects, at a fraction of the price you would gladly pay for such valuable, permanent advertising.

GET ALL THE FACTS ON THESE PRACTICAL MODERN CONTAINERS — NO OBLIGATION TO YOU

We manufacture a complete line of modern steel Barrels, Drums, and Pails 1 to 65 gallon sizes.

Write for our new catalog "MODERN STEEL CONTAINERS"
—No obligation to you.

WILSON & BENNETT MFG. CO.

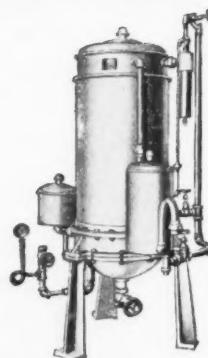
GENERAL OFFICES AND FACTORY—6528 S. Menard Ave.,
Chicago. Phone—Republc 0200

EASTERN OFFICE & FACTORY SOUTHERN OFFICE & FACTORY
353 Danforth Ave. Cortez and Bienville Sts.
Jersey City, N. J. New Orleans, La.
Phones—Delaware 3-4700 Phone—Galvez 2171
Cortland 7-0231

Three Modern Factories
Sales Offices and Warehouses in Principal Cities

"POLAR" WATER STILLS

Manufactured exclusively by us



Distillation is the only convincing answer to the demand for pure water. Polar Water Stills have had an outstanding acceptance where efficient, economical water distillation is required. Many thousands of them are in use and giving excellent service today.

The Industrial type shown above is steam operated and can be furnished in capacities to meet any requirements.

Smaller stills for laboratory use and small distillation requirements are furnished in urn, wall and stand types, electrically and gas operated.

U. S. Bottlers Machinery Co.
4012 No. Rockwell St. Chicago, Ill.
Offices in all principal cities

**SPECIALTY
SOAP PRODUCTS**

- Liquid Soap Base
- Potash Oil Soap
- Liquid Soap
- U. S. P. Green Soap
- U. S. P. Cresol Compound
- Coal Tar Disinfectants
- Pine Oil Disinfectants
- Insecticides
- Liquid Floor Wax
- Auto Soaps
- Shampoo
- Pine Oil Soap
- Shampoo Base

We manufacture for the trade only

HARLEY SOAP CO.
2852 E. Pacific St.,
Philadelphia, Pa.

Ask for samples
of above specialty
bulk products.

THE PHENOL COEFFICIENT

(From Page 103)

remained after 5 minutes. Such irregularity is to be expected, but on the whole it is proved that when the control counts approximate the counts obtained in practice from ordinary floors, all the organisms are killed within approximately 5 minutes or less.

Summary and Conclusions

The results presented here prove that when coal tar disinfectants and cresol compound type disinfectants are diluted to 20 times their phenol coefficient they are effective in killing representative pathogenic microorganisms under practical conditions of use.

It is further proved that disinfectants of varying strength, that is, whether of high or low phenol coefficient, have the same germicidal activity and are equally effective under practical conditions when diluted to twenty times their respective phenol coefficients.

As a result of these tests it is concluded that:

(1) The phenol coefficient figure is a suitable measure of the practical value of phenol-like disinfectants when the factor "twenty times the phenol coefficient" is employed in connection with it for calculating the dilutions for use in practice.

(2) Disinfectant solutions made up to twenty times their phenol coefficient are of sufficient strength to kill exaggerated numbers of disease-producing microorganisms under practical conditions.

(3) When dilutions for use are made on this basis, coal tar disinfectants and cresylic disinfectants are equally germicidal.

(4) When phenol-like disinfectants are diluted in this way they are just as effective in killing disease-producing organisms under practical conditions as is five per cent carbolic acid.

Bibliography

- (1) Rideal, S. and Walker, J. T. A. Examination of Disinfectants. *J. San. Inst.*, **24**, 424-441, 1903; Approved Technique of the Rideal-Walker Test. London, 1921.
- (2) Hygienic Laboratory Bulletin, No. 82, April, 1912; Disinfectant Testing by the Hygienic Laboratory Method, Reprint 675, Public Health Reports, **36**, No. 27, July 8, 1921.
- (3) United States Food and Drug Administration Methods for Testing Antiseptics and Disinfectants. Circular No. 198, December, 1931.
- (4) Reddish, George F. The Significance of the Phenol Coefficient. *Soap*, **II**, No. 3, March, 1935, pg. 95.
- (5) Klarmann, E. Phenol Coefficient—What Value? *Soap*, **10**, No. 10, October, 1934, pg. 93.

EMULSION FLOOR WAXES

(From Page 111)

making an apparent saving of \$82.50. At this period, the approach of the Christmas holiday 1935, these people are now in the market for a duplicate 110 gallons of wax, in other words, the cheap wax they bought lasted half a year because of its having glue-like and soap-like characteristics rather than those wax-like characteristics that have been mentioned here and because it would not stand up on the floor.

The apparent saving of \$82.50 in cost of material is therefore completely lost and only the management at that point realize the tremendous loss in labor costs and the corresponding loss in floor appearance.

If it were necessary for one to be a technician to understand these points there would be an excuse for the present confused condition, but when we realize that by merely insisting upon making our choice of brands on the basis of the seven very apparent requisites of a floor wax, rather than to allow the one spectacular "self polishing," "no-rub" or "bright drying" feature to stand so prominently in the foreground of our thoughts as to close our eyes to the actual requirements of the product.

Talbert Disinfectant Co. has been organized recently in Memphis, Tenn., by Leo Goodman, Allie McAllister and Lucius Polk.

DI-BUG
PYRETHRUM
**POWDER
and
EXTRACTS**

Biologically tested for kill in our Peet-Grady laboratory. Your customers want killing power. Buy DI-BUG Products and insure your success. DI-BUG Pyrethrum Extracts are made with

SPRAYSEN

The scientific insecticide base free from kerosene odor. Uniform—175° F. flash — effective distillation range.

SHERWOOD
PETROLEUM COMPANY, Inc.
BUSH TERMINAL, BROOKLYN, N.Y.

*Branches or Agents
in Principal Cities*

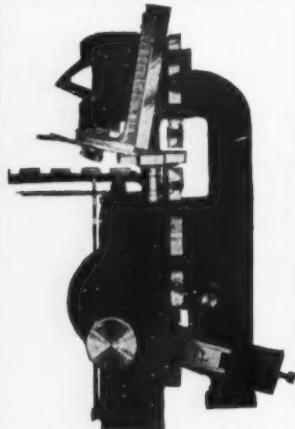
Special Offerings of

New CRUTCHERS



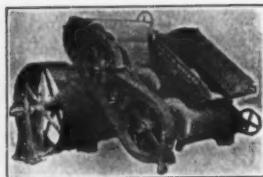
This Newman brand new, all steel, steam jacketed soap crutcher will crush any kind of soap. We also build another crutcher especially adapted for laundry soap.

Automatic JONES PRESS



Small size fully automatic Jones toilet soap press. Capacity 150 to 200 small cakes per minute. A real buy at an attractively low price. Has been completely rebuilt in our shops.

H-A SOAP MILL



This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls. Priced for quick sale.

New and Rebuilt SOAP MACHINERY by NEWMAN

We carry a complete line of equipment for the soap and sanitary products industry. All used equipment is rebuilt in our own shops and is guaranteed to be in first class condition. All new equipment that we manufacture such as crutchers, frames and cutting tables is of the finest material and workmanship. You can buy with confidence from Newman.

USED SPECIALS

For the Soap, Chemical, Cosmetic and Allied Trades

- H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
- Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
- Ralston Automatic Soap Presses.
- Scouring Soap Presses.
- Empire State, Dopp & Crosby Foot Presses.
- 2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
- H-A 4 and 5 roll Steel Mills.
- H-A Automatic and Hand-Power slabbers.
- Proctor & Schwartz Bar Soap Dryers.
- Blanchard No. 10-A and No. 14 Soap Powder Mills.
- J. H. Day Jaw Soap Crusher.
- H-A 6, 8 and 10 inch Single Screw Plodders.
- Allbright-Nell 10 inch Plodders.
- Filling and Weighing Machine for Flakes, Powders, etc.
- Steel Soap frames, all sizes.
- Steam Jacketed Soap Remelters.
- Automatic Soap Wrapping Machines.
- Glycerin Evaporators, Pumps.
- Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
- Perrin 18 inch Filter Press with Jacketed Plates.
- Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.
- Day Grinding and Sifting Machinery.
- Schultz-O'Neill Mills.
- Day Pony Mixers.
- Gardiner Sifter and Mixer.
- Proctor & Schwartz large roll Soap Chip Dryers complete.
- Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.
- Day Talcum Powder Mixers.
- All types and sizes—Tanks and Kettles.
- Ralston and H.A. Automatic Cutting Tables.
- Soap Dies for Foot and Automatic Presses.
- Broughton Soap Powder Mixers.
- Williams Crutcher and Pulverizer.
- National Filling and Weighing Machines.

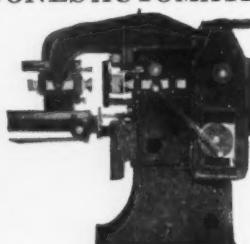
Send us a list of your surplus equipment we buy separate units or complete plants.

Newman Tallow & Soap Machinery Co.

1051 W. 35th St., Chicago, Illinois

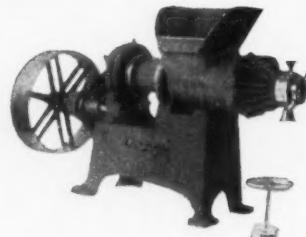
Our forty years soap experience can help solve your problems.

JONES AUTOMATIC



4 Jones Automatic combination laundry and toilet soap presses. All complete and in perfect condition.

SINGLE SCREW SOAP PLODDER



Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally guaranteed.

CLASSIFIED ADVERTISING

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, \$2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, \$1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 254 West 31st St., New York.

Positions Wanted

Soapmaker, considered good and hard worker. Experience in the making of all soda and potash soaps. First class references. Seeks new connection. Address Box No. 680, care *Soap*.

Soapmaker and Chemist, reliable, received training abroad. Able to make any kind of soap. Own analysis; looking for new and steady position. Address Box No. 681, care *Soap*.

Soapmaker with 38 years of experience in Europe and America. Can make the following soaps: All kinds of settled soaps, down-boiled, semi-boiled, cold process soap, textile oil soaps, liquid and soap base and many other soaps from the kettle to the frame in the most economical way. Address Box No. 685, care *Soap*.

Soapmaker and Superintendent—Have had long experience in making all kinds of soap. Analyze any soap or soap material. Address Box No. 686, care *Soap*.

Salesman—Man with 20 years' experience traveling mostly in the southern part of the United States for national manufacturers of soaps, cosmetics, and allied products, is available as sales representative in the South. Excellent record. Have covered territory from Carolina to Texas, Okla. For further details communicate with Box No. 674, care *Soap*.

Position Wanted for a period of three months or a part thereof, by soap chemist. Production, research or installation. Now located in middle west. Address Box No. 675, care *Soap*.

Executive—with clear record of 15 years as general manager of company producing toilet, laundry and textile soaps, desires position as department head, or assistant to general manager or president, of aggressive and growing company. Experience includes purchasing, production, sales and administration. Compensation secondary to future possibilities. Best of references as to ability and integrity. Excellent reason for desiring change. Address Box No. 676, care *Soap*.

F. & S. Quality Colors for TOILET SOAPS LIQUID SOAPS TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.
205 FULTON STREET
NEW YORK, N.Y.

Import—Manufacture—Export

NEW AND REBUILT SOAP MACHINERY

SPECIAL

1—Jones Automatic Vertical Soap Press

- 1—Proctor Soap Chip Dryer
- 4—No. 1, 2 and 3 Mead Mills
- 4—3, 4 and 5 Roll Steel Mills
- 1—10" Houchin-Aiken Plodder
- 1—Automatic Power Cutting Table
- 1—Broughton Mixer, jacketed
- 2—No. 10A Blanchard Mills
- 3—Soap Foot Presses
- 6—Filter Presses, sizes 6" to 36"
- 6—Granite Stone Mills, 2, 3, and 4 rolls
- 2—Glycerine Evaporators
- 50—1200 lb. Soap Frames
- 4—Jacketed Vertical Crutchers
- 2—1,500 lb. Horizontal Crutchers
- 2—Hand Power Slabbers
- 2—Hand Power Cutting Tables
- 2—Houchin Chippers, belt driven

600 and 1,200 lb. Frames, Kettles, Pumps, Tanks, Filter Presses, Wrapping Machines, Tube Fillers, Closers, Crimpers, Dry Powder Mixers, Pulverizers, Grinders, Amalgamators, Mixers, etc.

Send for Complete List (Bulletin No. 15)
WE BUY AND SELL FROM SINGLE ITEMS
TO COMPLETE PLANTS.

STEIN-BRILL
CORPORATION

183 VARICK STREET
Phone:
WALKER 5-6892-3-4

NEW YORK, N.Y.
Cable Address:
"BRISTEN"

REBUILT SOAP MACHINERY

SPECIALS

Machinery from former plants of National Soap Powder Co., A. W. Barnes Soap Co., and Pennsylvania Soap Co.

- 1—Allbright-Nell 4'x8' Cooling Roll, with top feeder roll, scraping knife.
- 4—5000 lb., 1500 lb., 1000 lb., Jacketed Vertical Crutchers.
- 2—1500 lb. Horizontal Crutchers.
- 1—Steel Soap Kettle, 5' dia. x 10' high.
- 1—Houchin 400 lb. Amalgamator.
- 4—Houchin Soap Plodders, 8" and 10".
- 2—Rucchmann 4-roll inclined Granite Mills, 18"x24", motor driven.
- 1—Broughton 1200 lb. Soap Powder Mixer.
- 2—Tabor Soap Pumps.
- 4—Houchin 4 and 6-knife Chippers, 20".
- 1—Houchin Soap Foot Press.
- 1—Houchin 1500 lb. Power Slabber.
- 1—Houchin Hand Slabber.
- 2—Houchin 2-way Soap Cutting Tables.
- 1—Jones "A" Automatic Soap Press.

1—Proctor and Schwartz Soap Chip Dryer, steel frame, 7-section, 1—cooling section, complete with 5-roll P. & S. Mill. Located on Pacific Coast.

MISCELLANEOUS—Soap Frames, Kettles, Mixers, Pony Mixers, Powder Fillers, Labelers, Wrappers, Tanks, Pumps, Boilers, etc.

Send for Latest Bulletin.

CONSOLIDATED PRODUCTS CO., INC.
15-21 Park Row New York, N. Y.
BArclay 7-0600

We buy your idle Machinery—Send us a list.



REFINED NAPHTHALENE

CRUSHED, CRYSTALS, POWDER, LUMP, CHIPS, FLAKES

For use in the manufacture of deodorizing blocks, moth preventives and other insecticides.

ALSO BALLS, BLOCKS, TABLETS.

**THE WHITE TAR COMPANY
OF NEW JERSEY, INC.
Phone Kearny 2-3600**

BELLEVILLE PIKE

KEARNY, N. J.



Brighter

YES . . . but contrariwise, we'd like to hide its brilliance behind a bushel! So much wax is sold on the strength of the self-polishing feature that we want to disassociate Rubber Gloss from this class forever. We exact seven major requirements from a floor wax before we say it's good. Gloss is one of them, but only one—and about fifth in importance. They are

TOUGHNESS OF FILM
WATER-RESISTANCE
BALANCE OF FILM
NON-SLIP
GLOSS
LACK OF SURFACE TENSION
APPROVALS

Rubber Gloss gives you all these and more besides.

Buy it for its deeper, sparkling lustre if you will, but don't let this one feature overshadow the other top-notch qualities!

**FRANKLIN RESEARCH
COMPANY**

5134 Lancaster Avenue
PHILADELPHIA, PA.



Distributors in principal cities

Modern Soap Perfumes

by FRANK H. SEDGWICK

Practical handbook on the science of soap perfumery. The author lays down the general principles which apply, and also offers a number of novel and useful suggestions on compounding. His experience in soap perfumery has been extensive in the British soap trade.

Priced, post free, at \$1.50 per copy. Send check with order.

American Agents

MAC NAIR-DORLAND CO.

254 WEST 31ST STREET

NEW YORK CITY

Sales Manager—Seven years' personal sales promotion experience opening new accounts for national concern, metropolitan New York territory, selling soaps, powders, detergents, to hotels, institutions, hospitals and restaurants. Large personal following. Self-starter. Gilt-edge references. Specialized business education. Address Box No. 691, care *Soap*.

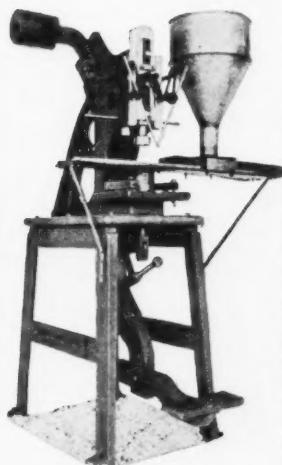
Soapmaker and Chemist—whose past record and experience qualify him for meeting highest technical requirements, desires steady employment with progressive concern. Address Box No. 689, care *Soap*.

Soapmaker and Chemist—with long experience making all kinds of soaps, seeks permanent connection. Address Box No. 690, care *Soap*.

Soap Maker—Man with 30 years' practical experience in Germany and U. S. desires position in soap plant. All types of soap and detergent specialties. Chemist. Prefer eastern seaboard. Communicate Box 679, care *Soap*.

Chemist, Ph.D., with long and thorough experience in soaps, cosmetics, fats and oils, desires steady position. Excellent references. Address Box No. 672, care *Soap*.

Machine-Made DEODORANT CAKES and BLOCKS are big sellers!



Make your deodorant and moth cakes with this heavy pressure foot press by the cold process and save money while you are increasing sales. A smooth, even cake will sell better because of its improved appearance and will cost less to make because this press not only cuts labor but saves 5% of your raw material. Why not let us make some sample cakes with your own para, naphthalene, etc., and submit complete information regarding cost and manufacturing process?

HOUCHIN MACHINERY CO., INC.
HAWTHORNE, N. J.

Positions Open

Salesman—Call on chemical, janitor, hotel, hospital, school and printing supply dealers; also large consumers direct. 250 specialties. Handsome illustrated catalog money-saving values. Quality merchandise. Wonderful opportunity for right man. Trojan Corp., 3107 S. Wabash Ave., Chicago.

A Prominent Manufacturer of liquid soaps, disinfectants, deodorizing cakes, etc., has an opening for a dependable sales representative. Address Box No. 688, care *Soap*.

Wanted—Chemist as assistant for position for prominent essential oil and aromatic chemical firm. Good opportunity. Young man with some experience in this field preferred. Give full details. Address Box No. 684, care *Soap*.

Miscellaneous

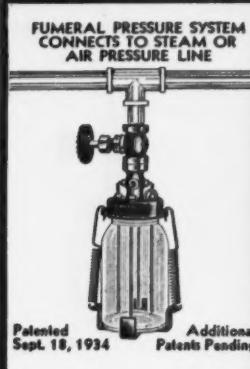
Floor Brushes—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.



We manufacture a complete line of high quality waxes for the jobbing trade, including no-rubbing liquid wax, regular type liquid wax, powdered wax, paste wax and also furniture polish. These products can be supplied in bulk, packaged under the Windsor label or with your own label which we supply.

**WINDSOR
WAX COMPANY**
53 PARK PL. New York N.Y.
factory
611 Newark St. Hoboken N.J.

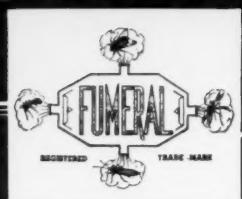
*Manufacturers of
WAX PRODUCTS EXCLUSIVELY*



FUMERAL PRESSURE SYSTEM

Does a Thorough Job..... INEXPENSIVE — EFFICIENT — ECONOMICAL

• The effectiveness of any good spray solution depends upon the efficiency of your spray equipment. Wet sprays are not efficient. It takes a minimum of 30 lbs. (steam or air pressure) to diffuse spray solutions. THE FUMERAL INSTANT DIFFUSER instantly charges the entire room. No insects, flies, cockroaches, ants, moths or germs have a chance to escape. • Connects to any steam or air line. Turn on the valve and in 4 minutes the operation is completed. No electricity to fuss with. No moving parts. Nothing to get out of order. FUMERALS stay sold. Simple — Inexpensive — More Efficient and Most Economical. Anyone can install it. Various brands of insecticides, germicides, bactericides, deodorants, disinfectants and perfumes all work well in the FUMERAL INSTANT DIFFUSER.



FUMERAL COMPANY, RACINE, WIS.

Manufacturers of Stationary and Portable Diffusers
Sanitary Consulting Engineers

YOUR OWN BRAND Toilet Soaps at Small Cost

For Details Address

GEO. A. SCHMIDT CO.

Manufacturers of  Soap of Every Description

236-238 West North Avenue
Chicago.



MEHLING

PHILADELPHIA
CAMDEN, N. J.
BOSTON, MASS.

EST.



1869

SILICATE
DESTIDA

MEHLING BROS. CHEMICAL COMPANY

Oil Soap—Have method for new type crystal oil soap base. Heavy, firm, crystal clear, contains only 30 per cent fatty acids. I am a soap maker with 25 years' experience. Open for new position with established soap firm. Address Box No. 678, care *Soap*.

Wanted—Back copies of SOAP—March 1931 and May 1933. Any person having duplicates not in use, please send to Box No. 692, care *Soap*.

Formula—Soap cleanser for walls, woodwork, etc.—finest product of its type. Has met with some success locally. Would like to arrange with manufacturer to take over manufacture and sale in other district. Address Box No. 683, care *Soap*.

Wanted—We are in the market for an automatic device for feeding detergent powder into dishwashing machines. Please send details or name of manufacturer to Box 671, care *Soap*.

Sprayed Soap Powder—British soap manufacturers require bulk supplies of soap powder made by spraying process. Address Box No. 663, care *Soap*.

THE PATENTED

"LIGHTNIN"

MIXING ACTION

The wide use of "Lightnin" Mixers in the soap industry is due to two things. 1. The efficiency of the patented double mixing action. 2. The sturdy dependability of these rugged mixers.

A rapid bottom-to-top turnover plus a slow rotation quickly and thoroughly mixes liquid soaps, disinfectants, oils, etc. Can be attached to any size or shape tank, open or closed. As mixing specialists, consult us about your mixing problems. No charge, of course. Write.

"Lightnin" Geared Drive Heavy Duty Portable Mixers. 1/4 to 10 H. P.: 100 R.P.M. to 800 R.P.M.

"Lightnin" Angular Off-Center Mixers for fixed installations on large size tanks. Sizes 2 to 50 H.P. and larger.

MIXING EQUIPMENT CO.
INCORPORATED
1050 GARSON AVE., ROCHESTER, N.Y.

High cost of Lavender and the Fine Quality of our product has won many fine friends for

Lavender L Parento at \$4 per lb.

*Write for your
sample to - day*

Compagnie Parento, Inc.
CROTON-ON-HUDSON, N. Y.

NEW YORK CITY DETROIT CHICAGO
LOS ANGELES SAN FRANCISCO
SEATTLE PORTLAND, ORE. TORONTO

We announce development of new type soap colors

PYLAKLORS

They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
Olive Green	Palm Green
Yellow	Golden Brown
True Blue	Violet

*It will pay you to send
for testing samples.*

PYLAM PRODUCTS CO., INC.

Manufacturing Chemists, Importers, Exporters
799 Greenwich St. New York City
Cable Address: "Pylamco"

Where to buy

RAW MATERIALS AND EQUIPMENT

for the Manufacture of Soaps and Sanitary Products

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 132, for page numbers, "Say you saw it in SOAP."

ALKALIES

American Cyanamid & Chemicals Corp.
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

General Chemical Co.
Grasselli Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Co.
Innis, Speiden & Co.
Mechling Bros. Chemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer, Inc.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Charles Fischbeck & Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Schimmel & Co.
Solvay Sales Corp.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

COAL TAR RAW MATERIALS (Cresylic Acid, Tar Acid Oil, etc.)

American-British Chemical Supplies
Baird & McGuire, Inc.
Barrett Co.
T. G. Cooper & Co.
Innis, Speiden & Co.
Koppers Products Co.
Monsanto Chemical Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrele
Pylam Products Co.

CONTAINERS and CLOSURES

American Can Co. (Tin Cans, Steel Pails)
Anchor Cap & Closure Corp. (Closures & Bottles)
Cin-Made Corp. (Paper Cans)
Continental Can Co. (Tin Cans)
General Can Co. (Tin Cans)
Hinde & Dauch (Corrugated Fibre Products)
Maryland Glass Corp. (Bottles)
National Can Co. (Tin Cans)
Owens-Illinois Glass Co. (Bottles)
Wilson & Bennett Mfg. Co. (Steel Pails and Drums)

DEODORIZING BLOCK HOLDERS

Cin-Made Corp. (Paper)
Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Palmer Products, Inc.

ESSENTIAL OILS

Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer Inc.
Charles Fischbeck & Co.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
Magnus, Mabee & Reynard, Inc.
Schimmel & Co.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

(Continued on page 130)

BULK AND PRIVATE BRAND PRODUCTS

An-Fo Manufacturing Co.
Baird & McGuire, Inc.
Chemical Supply Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Eagle Soap Corp.
Federal Varnish Co.
Franklin Research Co.
Fuld Bros.
Gouland & Olena
Harley Soap Co.
Hull Co.
Koppers Products Co.
Kranich Soap Co.
Palmer Products
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
Uncle Sam Chemical Co.
T. F. Washburn Co.
White Tar Co.
Windsor Wax Co.

CHEMICALS

American-British Chemical Supplies
American Cyanamid & Chemicals Corp.
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries

RAW MATERIAL AND EQUIPMENT GUIDE

(Continued from page 128)

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 132, for page numbers, "Say you saw it in SOAP."

MACHINERY

Battle Creek Wrapping Machine Co. (Packaging Machinery)
Ertel Engineering Corp. (Filters, Mixers, Bottle Fillers)
Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
International Nickel Co. (Monel Metal)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Mixing Equipment Co. (Mixers)
Package Machinery Co. (Packaging)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Stokes & Smith Co. (Packing Machinery)
U. S. Bottlers Machinery Co. (Bottle Filling and Cleaning)

P. R. Dreyer, Inc.
Felton Chemical Corp.
Charles Fischbeck & Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Schimmel & Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.
Stein-Brill Co.

MISCELLANEOUS

Anchor Cap & Closure Corp. (Metal Caps)
T. G. Cooper & Co. (Waxes)
Dobbins Mfg. Co. (Pails, Mop Wringers, etc.)
General Chemical Co. (Fluorides)
General Naval Stores Co. (Pine Oil-Rosin)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Co. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants and Waxes)
Murray & Nickell Mfg. Co. (Moth Proofing Liquid)
Pylam Products Co. (Lathering Agent)
Rohm & Haas Co. (Insecticide Base)

OILS AND FATS

Balfour, Guthrie & Co.
T. G. Cooper & Co.
Eastern Industries
Independent Mfg. Co.
Industrial Chemical Sales Co.
Leighorn Trading Co.
Michel Export Co.
Murray Oil Products Co.
Newman Tallow & Soap Machinery Co.
Welch, Holme & Clark Co.

PARADICHLOROBENZENE

Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

PERFUMING COMPOUNDS

Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.

PETROLEUM PRODUCTS

Atlantic Mfg. Co.
O'Connor & Kremp
Sherwood Petroleum Co.
L. Sonneborn Sons.

PYRETHRUM AND DERRIS PRODUCTS

Insect Flowers and Powder, Pyrethrum Extract,
Derris Products

S. B. Penick & Co.
R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.
Sherwood Petroleum Co.

SOAP DISPENSERS

Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Palmer Products

SODIUM SILICATE

General Chemical Co.
Grasselli Chemical Co.
Mechling Bros. Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SPRAYERS

Breuer Electric Mfg. Co.
Dobbins Mfg. Co.
Fumeral Co.
Getz Exterminators
Hudson Mfg. Co.
Lowell Sprayer Co.
Volume Sprayer Mfg. Co.

TRI SODIUM PHOSPHATE

General Chemical Co.
Grasselli Chemical Co.
Monsanto Chemical Works
Victor Chemical Works
Warner Chemical Co.

SOAP

HULL POWDERED METAL POLISH

Always fresh
Easy to handle
Absolutely non-inflammable



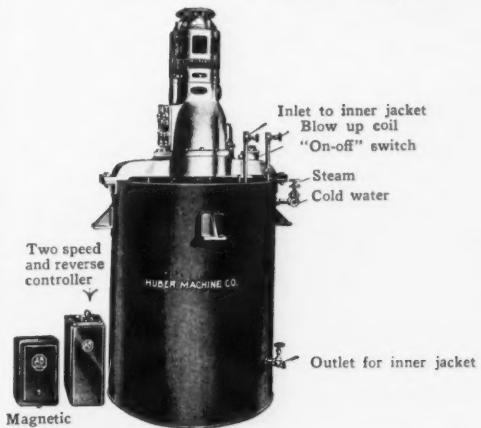
THE HULL COMPANY

305 Washington Street
Brooklyn, N. Y.

The New

Huber Electro-Perfection Crutcher

Electrically Driven, Two Speed and Reverse Crutcher, Built in three sizes:— 1500 — 2400 — 3000 lbs.



HUBER MACHINE CO.
265 46th Street Brooklyn, N. Y.

PYRETHRUM FLOWERS

by C. B. GNADINGER

This book gives a thorough and accurate account of recent work on the production, testing, and utilization of Pyrethrum Flowers, and should be of value to all who are interested in the destruction of insects. The text has been compiled from an extensive literature and from personal investigations of the author. In addition to chapters on the active principles of pyrethrum, its evaluation by chemical and biological methods and all aspects of its preparation and use as an insecticide, others contain information on factors affecting the quality of the flowers during storage, on methods of adulteration and their detection, etc. The book also includes a table of materials and a bibliography of all works concerning pyrethrum and its application.

Price \$3.50—270 Pages

Obtainable from

MAC NAIR-DORLAND CO., Inc.
254 West 31st Street
New York City
Send check with order

Going! Going!... Bound Volumes of “SOAP”

A very few complete bound volumes of SOAP are available. Those listed below are substantially and attractively bound in blue cloth covered cardboard stamped in gold. We can also supply some individual back copies at 50 cents each. Do you need any to complete your files?

Vol. 3, Sept., 1927 to Aug., 1928—5 sets @ \$10.00 ea.
Vol. 6, Sept., 1930 to Dec., 1930—1 set @ 5.00
Vol. 11, Jan., 1935 to Dec., 1935—3 sets @ 12.00 ea.

We also have a few bound volumes of Oil & Fat Industries, published as a separate publication prior to Jan., 1932, when it was added to SOAP as the Production Section. These are for the years 1929 and 1931 only and cost \$5.00 per volume.

Postage Prepaid in U. S.

MAC NAIR-DORLAND CO., Inc.
254 W. 31st STREET NEW YORK

INDEX TO ADVERTISERS

For product classification see pages 128 and 130

*For further details see announcement in 1935 SOAP BLUE BOOK

*American-British Chemical Supplies.....	62	*Koppers Products Co.....	114
American Can Co.....	December	Kranich Soap Co.....	58
Anchor Cap & Closure Corp.....	10, 11	*Leghorn Trading Co.....	December
American Cyanamid & Chemicals Corp.....	63	Lowell Sprayer Co.....	December
Applied Research Laboratories.....	129	Magnus, Mabee & Reynard, Inc.....	100
Aromatic Products, Inc.....	106	Manufacturing Chemist.....	46
Atlantic Mfg. Co.....	112	Maryland Glass Corp.....	October
*Baird & McGuire, Inc.....	90	*McCormick & Co.....	85
Balfour, Guthrie & Co., Ltd.....	December	McLaughlin Gormley King Co.....	80, 81
*Barrett Co.....	108	Mechling Bros. Chemical Co.....	126
Books.....	December	Michel Export Co.....	December
*Breuer Electric Mfg. Co.....	114	Mixing Equipment Co.....	127
Chemical Supply Co.....	118	Monsanto Chemical Co.....	Back Cover
Cin-Made Corp.....	November	Louis J. Muehle & Co.....	129
*Clifton Chemical Co.....	8	Murray Oil Prods. Co.....	133
*Columbia Alkali Co.....	9	National Can Co.....	79
Compagnie Parente.....	127	*Newman Tallow & Soap Machinery Co.....	122
*Consolidated Products Co.....	124	*Niagara Alkali Co.....	17
*Continental Can Co.....	December	O'Connor & Kremp Co.....	116
T. G. Cooper & Co.....	December	Owens-Illinois Glass Co.....	November
*Davies-Young Soap Co.....	13	Package Machinery Co.....	40
*Dobbins Mfg. Co.....	60	Palmer Products.....	133
Dodge & Olcott Co.....	19	Pease Laboratories.....	129
*Dow Chemical Co.....	104	S. B. Penick & Co.....	89
P. R. Dreyer, Inc.....	102	Philadelphia Quartz Co.....	16
*E. I. du Pont de Nemours Co.....	4	*John Powell & Co.....	77
*Eagle Soap Corp.....	2nd Cover	*R. J. Prentiss & Co.....	78
Eastern Industries.....	62	Hotel President.....	133
*Electro Bleaching Gas Co.....	17	*Proctor & Schwartz, Inc.....	74
Entomological Testing Laboratories.....	129	*Pylam Products Co.....	127
Ertel Engineering Corp.....	56	*Reilly Tar & Chemical Co.....	118
*Federal Varnish Co.....	112	*Rohm & Haas Co.....	84
*Felton Chemical Co.....	7, 82	Roney Plaza Hotel.....	14
Fezandie & Sperrle.....	123	*C. G. Sargent's Sons Corp.....	December
Charles Fischbeck & Co.....	6	Schimmel & Co., Inc.....	52
Franklin Research Co.....	124	George A. Schmidt & Co.....	126
Anthony J. Fries.....	December	Seil, Putt & Rusby.....	129
Fritzsche Brothers, Inc.....	15	Sherwood Petroleum Co.....	121
*Fuld Brothers.....	3	Skinner & Sherman.....	129
Fumeral Co.....	126	Foster D. Snell.....	129
General Can Co.....	110	Soap Perfumery & Cosmetics Trade Review.....	74
*General Chemical Co.....	83	*Solvay Sales Corp.....	58
General Naval Stores Co.....	96	*L. Sonneborn Sons.....	86, 87
Getz Exterminators.....	December	Standard Silicate Co.....	December
*Givaudan-Delawanna, Inc.....	88, 3rd Cover	*Stein-Brill Corp.....	123
Goulard & Olena.....	November	Stillwell & Gladding.....	129
*Grasselli Chemical Co.....	38	*Stokes & Smith Co.....	42
Harley Soap Co.....	120	A. M. Todd Co.....	December
Hercules Powder Co.....	76	Jos. Turner & Co.....	50
Hinde & Dauch.....	134	*Uncle Sam Chemical Co.....	116
Hochstatter Laboratories.....	129	*Ungerer & Co.....	Front Cover
*Hooker Electrochemical Co.....	November	U. S. Bottlers Machinery Co.....	120
*Houchin Machinery Co.....	70, 125	*Van Ameringen-Haebler, Inc.....	12
*Huber Machine Co.....	131	Victor Chemical Works.....	50
*Hudson Mfg. Co.....	108	Volume Sprayer Mfg. Co.....	December
The Hull Co.....	131	*Warner Chemical Co.....	44
Illinois Chemical Labs.....	129	T. F. Washburn Co.....	110
Independent Mfg. Co.....	126	Welch, Holme & Clarke Co.....	52
Industrial Chemical Sales Co.....	64	*White Tar Co.....	124
*Innis, Speiden & Co.....	56	*Wilson & Bennett Mfg. Co.....	120
International Nickel Co.....	72	Windsor Wax Co.....	125
Johnson Automatic Sealer Co.....	November		
R. A. Jones & Co.....	20		

Every effort is made to keep this index free of errors, but no responsibility is assumed for any omission.

PALMER DISPENSERS

The new "TI-POWDER" dispenser (at right) is positive in operation, no springs or mechanical parts to get out of order. Tilting dispenser delivers predetermined quantity of soap—wasteful continuous flow absolutely impossible. Tamper-proof, easily cleaned. Metal parts chrome plated — black china, opal or clear crystal glass bowl.



Palmer
PRODUCTS INC.
WAUKESHA, WIS.

The Palmer "D. C." Dispenser, (dependable construction), at left, is the lowest price dispenser offered. Has simple, positive spring-controlled valve. All parts chrome nickel plated. Fill through large, 1-inch top opening without moving or inverting bowl. Crystal glass decagon bowl (opal glass on special order)—with black enameled cap.

Write for new catalog on complete Palmer line of soap dispensers; janitor and sanitary supplies, maintenance materials and equipment.

Classified Advertising ~

Brings excellent results at a minimum cost. Rates are only 10c per word with a minimum charge of \$2 per issue (position wanted advertisements accepted at half rates). Whether you have some surplus equipment or material for sale, have a position open or are looking for a new connection, etc., use space in the Classified Section of *Soap*. It will place you in touch with the entire soap and sanitary products industry.



Spot or
Futures

TEASEED OIL

MURRAY
OIL PRODUCTS CO.
INCORPORATED
21 WEST ST., NEW YORK



Atlantic City's Ideal Convention Hotel on the Boardwalk

Every facility for the perfect handling of your convention or conference combined with an efficient hotel service.

Spacious comfortable lounges . . . dining salons . . . ballrooms . . . sun parlors . . . sun decks . . . excellent cuisine.

Swimming Pool . . . Salt Water Baths . . . Golf
Tennis . . . Fishing . . . Horse Back Riding

For detailed information and special rate plan
address the management.

The President
ATLANTIC CITY, NEW JERSEY

SET UP THIS DISPLAY STAND

STEP UP SALES

In just a few seconds the retailer sets up your Hinde & Dauch Selmor Display Stand and your products are imme-

dately given display preference. Hundreds of customers "serve themselves" for Selmor Stands are placed out where sales begin. Multiply this procedure by the thousands of retailers who sell your products and you'll have a fair idea of the tremendous sales advantage this type of merchandising has over products displayed on the shelf. If you want to step up sales, set up "Selmor."

* Selmor Display Stands are designed and manufactured by Hinde & Dauch, world's largest manufacturers of corrugated shipping boxes and corrugated paper products.

You'll WANT THIS BOOK!

THE HINDE & DAUCH PAPER COMPANY
215 Decatur Street • Sandusky, Ohio
Send me your book "Sell More With Selmor Merchandise Displays"

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____



Here and There

FOLLOWING the distribution of a substantial Christmas bonus last month by the Original Bradford Soap Works of West Warwick, R. I., the employes of the company clubbed together and purchased advertising display space in a local newspaper to thank the management publicly. A nice gesture, and also not such bad advertising for the company either!

Employment in the Canadian soap plants of Colgate-Palmolive-Peet is at the highest point in the history of the firm, even higher than the peak of 1929. C-P-P of Canada are boasting about this,—and with every justification in the world. It's something to boast about!

The 1936 *Soap Blue Book and Catalog* will soon be off the press and ready for distribution. If you have not renewed your subscription for SOAP . . . better do it now, and be sure you will receive a copy of the *Blue Book* without charge as a subscriber . . . a bigger and better *Blue Book* than ever before! Send in that subscription renewal now . . . and be sure of your copy.

With the Supreme Court of the U. S. voiding one by one the New Deal laws aimed to regulate agriculture and industry, some soapers are wondering how long it will be before the coconut oil tax will be frowned upon also by the Court. Soon, we hope, soon! But, the voiding of the AAA processing taxes has no connection whatever with the coconut oil tax, which is a part of the revenue act.

And while in Canada, they are boasting a trifle about soap plant employment . . . we would like to do a little boasting also . . . along the line that SOAP covers a group of industries doing annually about a *half billion dollars* worth of business . . . quite a field for the advertisers in SOAP . . . quite!

